

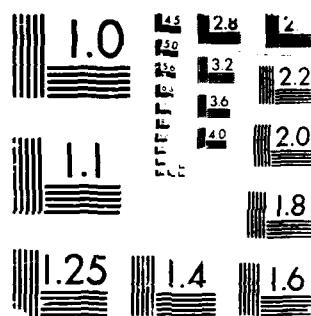
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A STUDY OF THE USE OF FAMILY PRACTICE PHYSICIANS IN  
TROOP HEALTH CLINICS O. J. ACADEMY OF HEALTH SCIENCES  
(ARMY) FORT SAN HOUSTON TX HEALTH C. H A SUTELIN  
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A STUDY OF THE USE OF FAMILY PRACTICE  
PHYSICIANS IN TROOP HEALTH CLINICS  
OF THE MEDDAC, FORT BELVOIR, VIRGINIA

A Problem Solving Project

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

Requirements for the Degree of

Master of Hospital Administration

By

Major Mary Anne Svetlik, MSC

April, 1981

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## REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION Unclassified		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; Distribution unlimited	
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE			
4. PERFORMING ORGANIZATION REPORT NUMBER(S) 23-88		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION US Army-Baylor University Graduate Program in Health Care Admin/HSMA-IHC	6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State, and ZIP Code)  FT Sam Houston, TX 78234-6100		7b. ADDRESS (City, State, and ZIP Code)	
8a. NAME OF FUNDING / SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF FUNDING NUMBERS	
		PROGRAM ELEMENT NO.	PROJECT NO.
		TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) A STUDY OF THE USE OF FAMILY PRACTICE PHYSICIANS IN TROOP HEALTH CLINICS OF THE MEDDAC, FORT BELVOIR, VIRGINIA			
12. PERSONAL AUTHOR(S) MAJOR MARY ANNE SVETLIK			
13a. TYPE OF REPORT Study	13b. TIME COVERED FROM JUL 80 to APR 81	14. DATE OF REPORT (Year, Month, Day) APR 81	15. PAGE COUNT 119
16. SUPPLEMENTARY NOTATION			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB-GROUP	
		FAMILY PRACTICE PANELS; HEALTH CARE IN TROOP CLINICS	
19. ABSTRACT (Continue on reverse if necessary and identify by block number)			
<p>This study examines the degree of patient satisfaction and staff satisfaction with the Family Practice Panel Model providing health care in troop health clinics at Fort Belvoir, Virginia. Key words:</p> <p>→ Family Practice Panel Model, Medical Family Practice Panel Model, Health Care Military medicine, Army personnel, SMO</p>			
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION	
22a. NAME OF RESPONSIBLE INDIVIDUAL Lawrence M. Leahy, MAJ(P), MS		22b. TELEPHONE (Include Area Code) (512) 221-6345/2324	22c. OFFICE SYMBOL HSMA-IHC

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## ACKNOWLEDGEMENTS

This author wishes to extend thanks to the many individuals who assisted and/or inspired me in the initiation and completion of this Problem Solving Project as well as the numerous other projects of this residency year.

I would particularly like to thank Colonel David G. Doane, MC, Commander, for his instrumental role in suggesting this analysis of the Family Practice Clinics at this MEDDAC's health clinics located at Fort Belvoir, Virginia. I would also like to thank Colonel Bobby B. Emmons, MSC, Preceptor, as well as Colonel Doane for their continuous support and encouragement throughout this year and for their sharing of management philosophy on leadership in the health care arena.

Thanks are also in order to Colonel Oswaldo Bustos, MC, Chief of Family Practice at US DeWitt Army Community Hospital for his kind assistance in procuring helpful references for this study. His explanations of the purposes and goals of family practice medicine provided an excellent frame of reference for the conduct of this study.

Additionally, I would like to thank Major James Bunch, MSC, Comptroller, for his assistance in procuring a portable computer terminal and computer time for use in analyzing the data collected in this study.

I would also like to thank Dr. Jack O. Lanier for his wise counsel and encouragement, including his optimistic assurances that the problems encountered in research (as in management) are simply hurdles placed there to test the mettle, tenacity, and perseverance of the administrator.

I would particularly like to thank Specialist Five Kay Boyd, Adjutant's Section for her outstanding assistance throughout this year. SP5 Boyd typed most of my papers this year, and she diligently relayed messages to me on a daily basis throughout the year.

I would like to thank all of the individuals of the sections I have visited during this year for their management insights and for their well prepared and clear presentations. These individuals have provided a frame of reference that was essential for the assessment of this problem solving project.

Finally, I would like to thank all of those who took time voluntarily and anonymously to respond to the questionnaires used in this study. It is my hope that your input to this study will result in findings that will be used to improve the patient care provided by the Army Medical Department.

MARY A. SVETLIK  
MAJ, MSC  
Administrative Resident



## I. INTRODUCTION

### Development of the Problem

#### Statement of the Problem

For several years the Medical Department Activity (MEDDAC) at Fort Belvoir, Virginia has been utilizing family practice physicians at its three outlying troop health clinics located at Fort Belvoir, Virginia. These physicians are assigned their own panel of approximately 200 families (a single soldier can qualify as a "Family") for care. It has been hypothesized that this approach makes more efficient use of the physicians' (and ancillary staff's) time after the morning military walk-in "sick call". It has also been suggested that this system provides more job satisfaction for the physicians and the other staff members.

Although informal feedback indicates that patients and staff "like" the system, no formal study has ever been conducted to verify the degree of acceptance of this form of care at these health clinic sites.

The problem is to determine the degree of patient satisfaction and staff satisfaction with the Family Practice panel model of providing health care in troop/health clinics at Fort Belvoir MEDDAC, Virginia. Implications for use of Family Practice model at other Army installations will also be discussed.

#### Historical Background - Conditions Which Prompted the Study

In the late 1960 - early 1970 time frame the Army Medical Department

staffed its health clinics and hospitals largely with drafted physicians. Physicians assigned to troop health clinics would see "sick call" active duty troops from approximately 0600 - 0930 hours on a walk-in basis. In many cases the remainder of the day was spent "cleaning up" or "training", or as time off. In short, both the physician and ancillary staff were under utilized. The conscientious physicians and other staff members resented the fact that their skills and abilities were not being used. Those physicians who had specialty training resented being assigned to general medical officer (GMO) duties that did not require their specialty training.

At some posts the physicians assigned to troop health clinics were those of dubious quality. In some cases the physicians did not have hospital admitting privileges. At such posts assignment of physicians to a health clinic was seen as a derogatory mark on their careers. Some felt that a "second class" status was implied by such an assignment.

To avoid the "stigma" problem, hospital commanders at other posts rotated physicians to the outlying health clinics on a weekly, monthly or other periodic rotational basis. This approach, of course, caused a lack of stability and a lack of continuity in the supervision of the health clinic staff. In sum, this approach did little to improve the "image" of being assigned as the Officer In Charge (OIC) of a health clinic.

As the draft started phasing out the input of drafted physicians during the 1973 - 1975 time frame, the specter of the long feared and much publicized

"doctor shortage" materialized. In retrospect, many in the health care arena contend that no physician shortage actually existed in the United States. However, clearly the Armed Services did witness an exodus of "Berry Plan" and other obligated physicians beginning around 1973. Since the early 1970's there has been a problem in procuring the needed mix of physician specialties in the Army Medical Department.

In an era of ever increasing specialization among physicians there was a reduction in the number of general medical physicians available to serve as the point of entry for health care, a problem that existed in both the military and civilian environment. The "Family Practice" specialty evolved as a model that offered specialization in the treatment of health care problems of families as a family unit. The US Army Medical Department designated a Family Practice consultant to initiate Family Practice in the Army's hospitals. Family Practice residencies also were initiated. The residency program started at Fort Belvoir continues today.

The response of patients to Family Practice in the Army's hospital setting has been extremely favorable. Waiting lists are usually long, particularly for retired personnel who wish to be treated by Family Practice physicians. However, at most posts the use of Family Practice physicians has been limited to the hospital building per se.

At Fort Belvoir the decision was made by the MEDDAC Commander to place two family practice physicians at each of the three troop clinics (recently redesignated health clinics) located at Fort Belvoir. These six physicians retain hospital admitting privileges for the patients they treat.

These physicians still see active duty troops on a "walk-in" basis from 0600 - 0900 hours, approximately. However, for the remainder of the day they see members of their family practice panels on an appointment basis. It was felt that this approach would provide the physician with the autonomy that many of them seek early in their careers. The small clinic setting approximates the environment of a small group practice in the civilian sector. It was hypothesized that this model of operation would be palatable and perhaps potentially satisfying to the physician who is new in the Army.

At Fort Belvoir most of the physicians assigned to the troop health clinics have been those who just had completed their residencies. After two to three years in the troop clinic setting many of them have moved on to a hospital to work as faculty in a Family Practice Residency Program.

#### Limitations

This study was limited to the three troop clinics (health clinics) located at Fort Belvoir. This MEDDAC also has a health clinic at Fort A.P. Hill which is staffed by a civilian physician and/or a military physician's assistant. The troop population at Fort A.P. Hill is under 100 troops. There is also a health clinic at Vint Hill Farms which is staffed by two civilian physicians and a Colonel, Medical Corps. None of these is a Family Practice physician. The troop population at Vint Hill Farms is likewise extremely small.

A control group for the patient questionnaire part of the study was needed. This researcher felt that the study should not compare family

practice at the outlying clinics with family practice at DeWitt Army Community Hospital. Since the clinics not located at Fort Belvoir serve such a small number of active duty troops, it was felt that comparison with Fort A.P. Hill and Vint Hill Farms clinics would be spurious.

Ideally, this researcher would have chosen a troop health clinic population as a control group. Consideration was given to conducting the survey at a health clinic at another installation's MEDDAC. However, the fact that the control group would be under the leadership of a different MEDDAC at a different type of post seems likely to cast doubt on the value of the data as "controlled" data. Hence this idea was rejected. It was decided to limit the study to those assets available within the MEDDAC.

One clinic, the Acute Minor Illness Clinic (AMIC), at DeWitt Army Community Hospital was selected as the control group. This clinic sees active duty sick call patients on a walk-in basis from 0730 - 0900 hours, Monday through Friday. It is staffed with two physicians, neither of whom are family practice physicians. The AMIC has AMOSIST trained staff as the principal point of contact and screening for patients, whereas the troop health clinics have a PA or licensed practical nurse (91C short or long course) to screen patients initially. As an approved exception to HSC policy, DeWitt's AMIC clinic sees dependents and other AMIC patients on an appointment basis beginning at 0900 hours. These similarities were viewed as sufficient to justify selection of the AMIC as the "control group" for the purposes of this study.

### Review of the Literature

A review of the literature indicates that no research has been conducted on attitudes about the use of family practice physicians in troop or health clinics in the Army setting. In this sense this study is breaking new ground.

A number of relevant articles from current journal literature were reviewed by this researcher. Many of these articles described in general terms the attributes of patient satisfaction with care. Many of these articles contained no documented research, but merely described what the author thought was important to patients in order for them to be satisfied with their care.

A few articles did utilize relevant research tools. Dr. Betty Mawardi discussed the satisfactions and dissatisfactions of medical practice from the physician's perspective. Hers was a longitudinal study that described how some physicians' priorities in practice and in life expectations changed over the years. For example, some did not like treating patients they could not help to improve. Others now viewed time off (not money) as more important in their life. Stresses were caused by paperwork, time pressures, and office details.

William B. Stiles, et al, discussed the preferences of patients in obtaining information from their physicians. The patients studied wanted information on the severity and prognosis of their illness. They desired the physician to be kind, sympathetic, and understanding during the patient-physician encounter. Most of all these patients wanted the physician to

be warm and caring.<sup>2</sup>

A study by Dr. Mary Snyder and Dr. John Ware on patient attitudes towards physicians indicated that patients desire a balance between the physician's caring behavior and his competence (curing behavior). Patients in the sample studied also stated that good access and convenience were important factors in evaluating their physicians.<sup>3</sup>

A very pertinent study was done by Dr. Jim L. Wilson in 1975. In his study, titled "Patient Satisfaction in a Navy Family Practice Clinic", he noted that the Family Practice program there began in 1972, and that his study was the first effort to assess the attitudes of patients toward the care received.<sup>4</sup> Several items from this questionnaire were adapted for use in the study conducted by this researcher.

A draft of the proposed questionnaire had been completed when this researcher found two other relevant source documents. The first was a 1974 article on consumer satisfaction with the Army's Acute Minor Illness Clinic model compared with the General Medicine Clinic model. At the time this study was done the AMIC concept was new to the Army Medical Department. The questionnaire, devised by Major Merle Preble, MD and Colonel Llewellyn Legters, MD, gathered demographic data as well as information on patient satisfaction with care received at the AMIC.<sup>5</sup>

The other relevant document was HSC Form 128-R, "Outpatient Questionnaire" (An Ambulatory Patient Care Program Document) which was administered throughout US DeWitt Army Hospital in January - February 1981. Examination of this document indicates that it must surely have

evolved from the questionnaire devised by Preble and Legters, for the similarities are too remarkable to be merely a coincidence. A copy of HSC Form 128-R is provided at Appendix A.

This researcher reviewed the responses to the questionnaire prescribed by HSC and then decided to use some parts of the HSC questionnaire for this study. Some parts which seemed to be confusing to the patients surveyed were either omitted or were modified. It is felt that using parts of the HSC questionnaire (which has been validated through repeated use and statistical analysis) would add to the validity and reliability of this study.

In addition to the articles mentioned here, this researcher also read over thirty other articles on patient and physician satisfaction. Many of the articles were general discussions and were not based on statistical analysis. However, several dealt with gathering and analyzing data, albeit not data relevant to this research project. These studies were useful in determining how to select and analyze a sample from the available population. They also provided useful models for structuring this problem solving project (PSP) in its various stages.

#### Problem Solving Methodology

##### Assumption

For the purposes of this study it shall be assumed that Family Practice physicians will continue to be assigned to US DeWitt Army Hospital in sufficient numbers to permit staffing of outlying clinics with Family Practice physicians.



### Research Methodology

After the questionnaire used in this study was drafted and revised it was reviewed by one of the physicians from one of the troop/health clinics. It was subsequently typed for distribution to patients.

This researcher had access to the addresses listed for the Family Practice families belonging to each Family Practice panel. A random selection was made and envelopes were typed to send questionnaires to 50 patients from the panel of each of the six physicians involved in the study. Hence, 300 questionnaires were mailed out initially.

It was anticipated that some questionnaires would be returned as undeliverable. It was decided that these envelopes could be turned over to the Administrative Officer for the Family Practice Department (a Medical Service Corps Officer) so that he could confirm the departure of the family and permit entrance of another family into the Family Practice panel. At the same time this researcher randomly selected another family from that panel for inclusion in the survey. Over 30 questionnaires (over 10%) were returned.

In order to determine quickly to which panel the family belonged this researcher color coded the edges of the envelopes to indicate the physician affected. The postage paid return envelopes were likewise color coded for purposes of sorting the responses. Once opened, however, the responses were treated anonymously by clinic, not by physician, although many respondents elected to refer to their physician by name on the questionnaire.

The two-part questionnaire was mailed out during the week of 16

February 1981. Concomitantly an open ended questionnaire was devised for use by the staff of the health clinics. This was sent out and returned in March 1981. A copy of this questionnaire for the staff is shown at Appendix B.

The patients of the AMIC Clinic were surveyed in the first week of March 1981. Since addresses were not available, the randomly selected AMIC patients received questionnaires for completion at the conclusion of their treatment. A copy of the questionnaire completed by the patients is shown at Appendix C. The cover letter that accompanied the questionnaire is also shown at Appendix C.

The narrative data collected from the questionnaires was reviewed and is summarized in the next chapter. The quantifiable data from the patient questionnaire was coded for computer analysis. Responses indicating "Very Satisfied" were coded "5". "Somewhat Satisfied" responses were coded "4". "Not Sure" responses were coded "3". "Somewhat Dissatisfied" responses were marked "2", while "Very Unsatisfied" responses were marked "1" for the statistical computations. Responses marked "Not Applicable" were treated like "missing" responses for the purposes of statistical analysis. The findings and results of the computer analysis are also included in the next chapter.

#### FOOTNOTES

<sup>1</sup>Betty Hosmer Mawardi. "Satisfactions, Dissatisfactions, and Causes of Stress" Journal of American Medical Association 241 (April 6, 1979): 1483-1485.

<sup>2</sup>William B. Stiles, et al. "Interaction Exchange Structure and Patient Satisfaction with Medical Interviews" Medical Care 17 (June, 1979): 667-670.

<sup>3</sup>John E. Ware and Mary K. Snyder. "Dimensions of Patient Attitudes Regarding Doctors and Medical Care Services" Medical Care 13 (August, 1975): 669-670, 673-678.

<sup>4</sup>Jim L. Wilson, M.D. "Patient Satisfaction in a Navy Family Practice Clinic" The Journal of Family Practice 4 (1977): 594-5.

<sup>5</sup>Merle R. Preble, M.D., and Llewellyn Legters, M.D. "Patient Satisfaction Studies in Ambulatory Patient Care Areas: Comparison of General Medical Clinic to Acute Minor Illness Clinic (Preliminary Report" (1974): 336-343.

## II. DISCUSSION

### Description of Staffing of Health Clinics

The staffing authorized by the Table of Distribution and Allowances (TDA) for the North Post, South Post and Davison US Army Airfield (DUSAA) Health Clinics is shown at Appendix D. It is noted that each of these health clinics is authorized one physician. However, the Commander, US DeWitt Army Community Hospital (USDACH) determined that two family practice physicians would be assigned to each of these three Health Clinics to see panels of patients. As in the hospital environment, when one physician was on leave or TDY, the other physician could serve as backup to him.

The Commander also felt that the utilization of the Family Practice physicians in the health clinics would help to alleviate the parking problems experienced by patients at DeWitt Army Community Hospital where parking is at a premium. If six panels of Family Practice patients could be seen at the remote health clinic sites, then parking at DeWitt could be mitigated in part. Of equal importance, those Family Practice patients being seen in the outlying clinics would also have more convenient parking near the small health clinics, it was hypothesized.

The North Post Clinic is authorized five personnel (requires seven) but has approximately eleven personnel present for duty. DUSAA Clinic is authorized seven personnel (requires seven) but has eight present for duty.

The South Post Clinic is authorized four personnel (requires eight) but has approximately ten personnel present for duty at any given time (see Appendix D for TDA). For each clinic one of the "surplus" personnel is the additional Family Practice physician placed there by the Commander. Other "surplus" personnel include enlisted personnel from the 15th Combat Support Hospital (CSH) who are sent by their Commander for training in the clinics. South Post Clinic is able to operate solely because it is staffed by 15th CSH personnel. Other enlisted staff come from DeWitt Army Community Hospital. It was felt that these "actual" staffing levels are needed in order to enable the two physicians to be fully productive.

One DUSAA Family Practice physician is also a flight surgeon. His panel consists primarily of pilots, crew members, and their families. Efforts are made to assign patients to the North Post Clinic if the active duty sponsor works at North Post. However, available vacancies do not permit this to be done at all times. The goal, of course, is to make the clinic location as convenient as possible for the active duty member, be it North Post, South Post, or DUSAA Health Clinic locations.

#### Description of Questionnaire Used by Patients

The two part questionnaire mailed to each randomly selected Family Practice patient is shown at Appendix C. This questionnaire was also completed by randomly selected patients at the Acute Minor Illness Clinic (AMIC) of USDACH.

Of the 300 questionnaires mailed out to members of Family Practice,

122 usable responses were returned by April 1, 1981, the cut off date (40.6%). An additional 27 responses were returned that were so incomplete they could not be used. A few of these indicated they were not members of Family Practice even though USDACH records indicate they were notified of their acceptance into a Family Practice panel. The replies including the incomplete responses total 149 or 49.6% rate of return by April 1, 1981. Randomly selected questionnaires were sent to replace the thirty or so questionnaires that were returned as undeliverable. All responses received by April 1, 1981 were used in the compilation of the statistics. At the AMIC Clinic (control group) 53 questionnaires were collected.

The demographic data collected included sex, age, active duty (or other) status, grade of sponsor, number of persons in the immediate family, race, and location of family practice clinic. Responses indicating that those receiving mailed questionnaires were not members of family practice, or that they were seen at USDACH, were used as indicators that the individuals probably were not members of Family Practice panels in the health clinics. Such responses were excluded from the compilation of the Family Practice questionnaire statistical results.

The questionnaire asked patients how satisfied they were with the physicians, nurses, x-ray staff, parking facilities, and the like (see Appendix C). Open ended questions asked the patients what they liked best and least about their family practice care and/or facility. The questionnaire also asked what the respondent would like to change to improve services and/or the care received at their Family Practice clinic. Provision was

made for the respondent to comment on any of the questionnaire items (see Appendix C).

Some of those answering marked "not applicable" for certain questions such as satisfaction with x-ray and laboratory staff personnel. These responses were treated as "missing" responses in the analysis of the data.

#### Method of Treatment of Data

The questionnaires from the Family Practice patients were collected and sorted by clinic. However, in the statistical analysis of the data a table of random numbers was used to select 53 questionnaires for inclusion in the quantifiable data analysis. A similar number (~18) was randomly chosen from each clinic. All 53 responses from AMIC (control group) were used. All open ended responses were read and analyzed.

#### Criteria to be Used to Evaluate the Data

The following criteria are applicable to the evaluation of the data:

1. Ideally the mean of the responses on the questionnaire items should be 4.0 (mostly satisfied) or higher (very satisfied) in order to consider the questionnaire item to reflect sufficient satisfaction on the part of patients responding to the item.
2. The test results found to be large enough to reject the null hypothesis (of no difference between the groups) should be used as indicators of significant differences in the groups.
3. The system selected should maximize morale of the patients and staff to the maximum extent possible.

4. The system selected should be convenient for both patients and staff to the maximum extent possible.
5. The system selected should effectively use both physician and ancillary staff.

#### Other Background Information

It should be noted here that the physical facilities of the three health clinics vary considerably in age and amenities. The North Post Health Clinic/Troop Clinic building is approximately 10 years old. It is a modern air conditioned brick building that was built specifically to be a troop/health clinic. The physicians see active duty troops during a walk in "sick call" from 0630 hours to approximately 0900 hours. Then family practice patients are seen on an appointment basis until 1500 hours when the eight hour duty day ends at that clinic. There is a secure room for storing pharmaceuticals.

The South Post Clinic is at least a decade older than the North Post Clinic. Like almost all other older buildings at Fort Belvoir, the South Post Clinic is showing its age due to less than optimal engineer maintenance. The air conditioned brick building seems dark inside and more crowded than the North Post Clinic building. This clinic has a very secure vault for storing pharmaceuticals. No controlled drugs are maintained here or at the North Post Clinic. This clinic also closes at 1500 hours.

The DUSAA Clinic building is a wooden two story "temporary building" of 1940-1950 vintage. A small window air conditioning unit serves only a



small portion of the clinic. Although the building is very old, it has been painted inside and is reasonably light and airy. It is the most spacious of the three clinics. There is a secure area for maintaining pharmacy items. As with the other clinics, no controlled drugs are maintained at DUSAA Health Clinic.

None of these three clinics has x-ray capability. Laboratory capability is limited. That is, many urine and blood specimens can be taken by health clinic personnel and transported for the patient to the laboratory at USDACH. However, in some instances the patient must personally go to USDACH for laboratory work. If needed prescriptions are not available then the patient must go to USDACH to get the prescriptions filled. The OIC of each clinic noted that over 90% of all prescriptions could be filled from clinic supplies. Patients view this favorably, they report, since pharmacy service is very quick for these patients. However, for those patients who must go to USDACH to get a prescription filled, there is the inconvenience of an additional trip to another location some 5.3 miles away from DUSAA. Waiting times at midday can be up to 40 minutes at the USDACH pharmacy. It should be noted here that the distance from the South Post Clinic to USDACH is 1.2 miles and the distance from the North Post Clinic to USDACH is 2.1 miles.

#### Findings - Patient Questionnaire

##### Open Ended Responses

The open-ended responses asked what the patient respondent liked most and least about their health care facility and/or the care received there.

Patients could also respond with suggestions for improvements to the facility and/or to the care given there. Certain trends were noted at the various clinics. These will be discussed in the paragraphs which follow. The responses from patients at the three outlying health clinics will be covered along with the responses from patients treated at the AMIC Clinic.

Over 43% (53 of 122 responses) mentioned that they liked most being able to be seen by the same doctor. The percentages mentioning this were 38% at DUSAA Clinic, 44% at North Post Clinic, and 49% at South Post Clinic. About 25% of the Family Practice respondents mentioned they liked most the concern of the physician for their care. Several said they "never felt like a number" when being seen by the physicians at the outlying clinics.

The Family Practice patients also mentioned that they liked most the concern of the physicians who treated them. Over 32.5% from the DUSAA Clinic mentioned this, 23.3% from North Post Clinic, and 17.9% from the South Post Clinic for an overall percentage of 24.6%.

The third feature mentioned the most by the Family Practice respondents was that they liked not having to go through the central appointment system (CAS) to get an appointment. They also felt that appointments to be seen were available more quickly at the clinics than at the hospital (through CAS). Over 32.5% at DUSAA, 16.3% at North Post, and 28.2% at South Post (overall 25.4%) mentioned this.

Convenience of location of the clinic was mentioned by 4 respondents from the North Post Clinic (9.3%).

In general, responses to the open ended questions were fewer from patients treated at the AMIC Clinic when compared with the number of replies from Family Practice respondents.

Over 13.2% of AMIC patients mentioned they liked most the competence of the medical enlisted and other personnel who treated them. Over 11.3% mentioned they liked most the quality of care received at the AMIC Clinic. Over 11.3% said they liked the friendliness of the receptionist, Red Cross, and other staff of the AMIC Clinic. Convenience of the location of AMIC was mentioned by two AMIC patients (3.7%).

While the respondents from the AMIC Clinic liked the friendliness of the ancillary staff, they also criticized the AMIC staff for "wasting time" and/or "visiting" with each other between patient appointments. Over 7.5% mentioned they liked this "least" about their care at AMIC Clinic. Not surprisingly, 13.2% mentioned that they liked least having to wait an "excessive" length of time to be seen at the AMIC Clinic. Over 20.8% disliked having to go through central appointment system to get an AMIC appointment. Some of these mentioned that there were not enough appointments available. Two patients (3.7%) said they disliked the fact that they "could not see a physician" for their AMIC care. Three AMIC patients (5.6%) complained they had been waiting for over a year to get into Family Practice. Three patients (5.6%) complained about long waits to get pharmacy prescriptions filled.

At the South Post Health Clinic four patients (10.2%) said that they liked least having to wait an "excessive" length of time to be seen for care.

Waiting time was not criticized at the other two health clinics.

Patients from the outlying Family Practice clinics criticized most the lack of the full range of services at the outlying clinics (21.3% overall). About half of those who mentioned this referred to the fact that they had to go to USDACH to get a prescription filled. Others mentioned the lack of x-ray and laboratory services at the clinics. One or another of these limitations was mentioned by 30% of DUSAA patients, 13.9% of North Post patients, and 20.5% of South Post patients who responded to the questionnaire.

Seven patients (5.7%) from the outlying clinics felt that all of the Family Practice physicians should be located at the USDACH building. These included four patients from DUSAA clinic, one from North Post clinic, and two from South Post clinic.

The other major criticism leveled at the Family Practice clinics pertains to the attitudes and friendliness (or professionalism) of the receptionists and corpsmen. Overall 15.5% of Family Practice respondents criticized the attitudes of receptionists and corpsmen. At DUSAA this was mentioned by two respondents (5%) while 23.2% of North Post and 17.9% of South Post respondents mentioned this. However, this was offset by approximately two respondents per clinic who said the receptionists were "very helpful".

Four patients (3.2%) criticized the North and South Post Clinics for closing at 1500 hours, stating that work schedules and school schedules make appointments after 1500 hours (or in the evenings) more attractive to

patients.

Somewhat inconvenient parking (i.e., across a street) was criticized by two patients who receive care at the North Post Clinic. However, convenience of the location of the North Post Clinic was praised by four patients.

Parking was praised by two patients from the DUSAA Health Clinic. While no patient treated at the DUSAA clinic praised the convenience of the location of the clinic in the open ended questions, only one person commented negatively about having to stop at the guard's security gate to get a "visitor's pass" each time a visit was made to the clinic at the heavily guarded airfield.

Two patients at DUSAA criticized the fact that the flight surgeon's duties made him unavailable for care of family practice patients on some occasions.

Three patients (two at DUSAA and one at South Post Clinics) said they felt the physicians' patient loads were "too big".

A lack of privacy in the examining room was mentioned by three patients (one at DUSAA and two at South Post Clinics). Two patients expressed dissatisfaction with the lack of privacy at the front desk (one at DUSAA and one at North Post).

Only a few suggestions were made concerning changes that could be made to improve the services and/or care received at the health care facility.

Eight Family Practice patients (6.5%) recommended that physicians take more time with their patients. (Recommending this were five patients

from DUSAA, one patient from North Post, and two patients from South Post Clinics.) One AMIC patient recommended the corpsmen be given more time to spend with patients.

Two patients from North Post recommended that older patients be permitted to be in the panel of a physician who is familiar with geriatric medicine.

Four patients (two from South Post Clinic and two from AMIC) recommended that patients over age 40 who request a full physical should be granted the request.

One patient suggested that dissatisfied patients should be allowed to change physicians. It should be noted here that every effort is made by this MEDDAC to accommodate such requests. Evidently this patient had not requested such action or did not know the option to change family practice physicians does exist.

#### Statistical Analysis of Quantifiable Data

Ordinal (rank order) data was collected from the patients concerning their level of satisfaction or dissatisfaction with their care. For purposes of statistical analysis, the subjective ratings rendered by the patients were coded as follows: 1 - Very Unsatisfied, 2 - Somewhat Dissatisfied, 3 - Not Sure, 4 - Somewhat Satisfied, 5 - Very Satisfied. Responses marked "Not Applicable" were treated as "missing responses" for the purpose of statistical analysis. A copy of the questionnaire used is located at Appendix C.

A copy of the coded demographic and other data is located at Appendix E. The statistical package used in this analysis was "Statistical Package for the Social Sciences" (SPSS). The SPSS Manual explained how to format the SPSS File in order to run and analyze the input data file (called IN.1). A copy of one of the several SPSS files used in this study is located at Appendix F. Appendix F shows SPSS file MA.1, a file that is designed to use the SPSS program crosstabs for chi square analysis. This researcher also prepared SPSS files for t-test analysis of the data from the two independent random samples used in this study.

As was mentioned earlier, the control group for this study were the 53 responses received from the AMIC. From the three outlying clinics randomly selected responses were picked from each clinic to comprise the 53 responses ultimately used in the statistical analysis.

In this study, then, the null hypothesis was that there was no difference in the degree of satisfaction of patients treated at the three family practice health clinics as compared with the satisfaction of patients treated at the AMIC. To put this in statistical terms, the null hypothesis was that the means of the two groups were equal. That is:

$$H_0: \mu_1 = \mu_2$$

In some case the number of cases (n) was small (under 30) and hence the t-test was employed in this analysis. The alternate hypothesis was as follows:

$$H_a: \mu_1 \neq \mu_2$$

Letting  $\alpha = .05$ , the two sided alternative required that the null hypothesis be rejected if the computed value of  $t$  was less than  $-t_{.025}$  or greater than  $t_{.025}$  for  $(n_1 + n_2 - 2)$  degrees of freedom ( $df$ ). Of course, if  $-t_{.025} \leq t \leq t_{.025}$  then the null hypothesis could not be rejected. As the degrees of freedom approach 30 the  $t$  values begin to approximate values on a  $Z$  table (standard normal). For degrees of freedom  $\geq 30$ , the  $t$  table indicates that  $t_{.025, .975} = 1.960$ . Hence values of  $t$  greater than 1.960 ( $df \geq 30$ ) are to be considered statistically significant. Where the value of  $t \geq 1.960$ , ( $df \geq 30$ ) the null hypothesis is to be rejected and the alternative hypothesis of an actual difference between the means is to be accepted. Where the degrees of freedom is less than 30 the  $t$  table must be consulted to determine the appropriate  $t$  value (which will be a value larger than 1.960).

The first  $t$  test compared levels of satisfaction of patients at the three outlying clinics (coded 55) with the levels of satisfaction of the patients treated at the AMIC (coded 44). In the resulting print out "Group 1" represents the data analyzed from the data combined from the three health clinics. "Group 2" is the data from AMIC Clinic.

Shown at Appendix G is the SPSS input file (DEW. 4) and the output file (SV. 4) showing the statistical results of the  $t$  test where "Group 2" is AMIC and the other group (group 1) is a combination of the DUSAA (DA), North Post (NR), and South Post (SP) clinics. It should be noted that the input file (DEW. 4) is identical to the MA.1 file (chi square - see Appendix F) except for the last three lines of the DEW. 4 file where the  $t$ -test instruction was substituted for the chi square (crosstabs) instruction.



Hence, only the last eight lines of SPSS file DEW. 4 are shown at Appendix G.

The F value and two tail probability are also shown in file SV. 4 in Appendix G. The F ratio of  $F = s_1^2/s_2^2$  or  $F = s_2^2/s_1^2$  requires that the larger s (i.e., sample standard deviation) be placed in the numerator in order to use the F distribution table which has critical values greater than or equal to 1.0. If  $s_1^2 = s_2^2$  then  $F = 1$  and it is assumed that  $\sigma_1^2 = \sigma_2^2$ . If the ratio  $s_1^2/s_2^2$  is smaller than the critical values found in the F table then it also is assumed that  $\sigma_1^2 = \sigma_2^2$ . In this instance the  $S_p$  (pooled) formula is used in calculating the t test.

Given the null hypothesis  $\sigma_1 = \sigma_2$ , the alternative hypothesis  $\sigma_1 \neq \sigma_2$  can be accepted only when the calculated F value exceeds the F value shown of the F distribution chart.

As can be seen in Appendix G the "overall level of satisfaction with care" received a mean score of 4.5385 from patients receiving care at the outlying clinics (group 1). The mean for the AMIC was 3.902. Both the t value (3.27) and the F value (4.85) indicate that the null hypothesis of no difference ( $H_0: \mu_1 = \mu_2$ ) should be rejected and the alternative hypothesis  $H_a: \mu_1 \neq \mu_2$  should be accepted. The df is greater than 30 for the t test and therefore  $t_{69,.025} = 3.27$  which is greater than the value of  $t = 1.96$  shown in the t distribution table. The probability of such a t score is .002, according to the computer results shown at Appendix G. Hence the null hypothesis is rejected. Likewise, the F value for satisfaction is 4.85. This should be compared with critical  $F_{50,51,.995} \approx 2.00$ . Since the calculated F of 4.85 is greater than the F value from the table then the null hypothesis of no difference is rejected and

the alternative hypothesis of a difference in levels of satisfaction is accepted. The probability is shown as .000. Since the responses from the outlying health clinics have the higher mean score, the level of overall satisfaction is noted as being significantly higher at the outlying clinics.

It should be noted that the mean from AMIC (3.9020) approaches the 4.0 rating of "somewhat satisfied". The 4.5385 mean from the outlying clinics is about midway between the somewhat satisfied (4) and very satisfied (5) ratings. In both cases it is apparent that the perception of the care received is very favorable in both clinics.

"Satisfaction with the physicians" (see Appendix G) indicates a mean of 4.615 for the three outlying health clinics and 4.244 for the AMIC. The  $t = 2.13 > \text{critical } t = 1.96$ . Hence the null hypothesis is rejected and the alternative hypothesis that there is a statistical difference in the level of satisfaction with the doctors is accepted. The calculated F value of  $2.93 > \text{critical } F \approx 2.0$  and hence indicates that the null hypothesis should be rejected and the alternative hypothesis accepted.

"Satisfaction with nurses" likewise indicates that there is a significant difference in the level of satisfaction with the nurses. The group 1 mean is 4.7674 and the group 2 mean is 4.4878. The calculated  $F = 3.04 > \text{critical } F \approx 2.0$  and calculated  $t = 2.10 > \text{critical } t = 1.96$ .

"Satisfaction with other medical personnel" was not significantly different between the two groups. That is,  $t = .03 < \text{critical } t_{.975} = 1.96$ , and  $F = 1.19 < \text{critical } F \approx 2.0$ . The mean for group 1 was 4.3529 while the mean for group 2 (AMIC) was 4.3478.

"Satisfaction with the receptionists" was found to have statistically significant results - but in favor of the AMIC clinic. The AMIC mean was 4.6078 while the other groups' mean was 4.0625. The calculated  $t = -2.55$  does not fall in  $-1.96 \leq t_{\text{calculated}} \leq 1.96$  and hence the null hypothesis of no difference is rejected and the alternative hypothesis of a difference in levels of satisfaction with receptionists is accepted. This finding is consistent with the remarks made by patients in the open ended section of the questionnaire covered in the previous section of this paper.

"Satisfaction with the quality of health care" was not found to be statistically significant. The means were 4.5098 and 4.1702 for groups 1 and 2 respectively. The calculated  $F$  value of  $1.93 < \text{critical } F \text{ of } 2.10$  and hence it must be assumed that  $\sigma_1 = \sigma_2$ . The  $t$  test using the  $S_p$  (pooled) formula indicates  $t_{96, .975} = 1.78$  which is less than the critical value of 1.96. Hence the null hypothesis of no difference cannot be rejected.

The item on "satisfaction with appointment personnel" reflected means of 4.04 (group 1) and 3.6458 (AMIC). The lower rating by AMIC patients may reflect dissatisfaction with the central appointment system. However, the  $t$  test did not indicate any statistical significance between the two groups. The calculated  $F = 1.22 < \text{critical } F \approx 2.0$  and the calculated  $t = 1.38$  is less than the critical  $t = 1.96$ . Hence the null hypothesis cannot be rejected.

"Satisfaction with the availability of appointments" received a mean rating of 2.9167 (Somewhat dissatisfied) from AMIC patients and a mean rating of 4.2 from the patients treated at the Family Practice clinics. The

calculated F of 1.71 < critical F of 2.10. Hence the t test using the  $S_p$  (pooled) formula was used resulting in a  $t_{96,.975} = 4.45$  which is greater than the critical t of 1.96. Therefore the null hypothesis of no difference was rejected and the alternative hypothesis of a difference in the level of satisfaction with the availability of appointments is accepted. That is, one can conclude that patients at the Family Practice clinics have higher satisfaction with the availability of appointments than do AMIC patients.

"The satisfaction with the pharmacy services provided at this location" indicated that there was no statistical difference in satisfaction. The mean for AMIC was 4.4565 while the mean for the other clinics was 3.9787. The calculated  $t = -1.95$  falls in the acceptance region of  $-1.96 \leq t \leq 1.96$ , although the probability of this happening is only .055.

The item on "satisfaction with medical records personnel" resulted in a t test result of  $t = -.95$ ; therefore the null hypothesis could not be rejected. The means were 4.2927 for AMIC patients and 4.0488 for the other clinics.

A number of patients marked "not applicable" on their responses to "satisfaction with x-ray staff" and "satisfaction with laboratory staff".

Presumably these patients did not utilize these services and therefore had no opinion on them. Neither item resulted in an F value or t value that exceeded the required critical values. Hence, for both, the null hypothesis of no difference in the levels of satisfaction could not be rejected. (See Appendix G for the t values and F values). The mean

satisfaction for x-ray staff was 4.5455 for group 1 and 4.5313 for group 2 (AMIC). The means for satisfaction with laboratory staff were 4.4865 for group 1 and 4.5294 for AMIC patients.

"Satisfaction with the convenience of the location of the facility" received mean scores of 4.66 (group 1) and 4.4565 (AMIC). The  $t = 1.26$  was not great enough to reject the null hypothesis.

The item on "Satisfaction with the parking facilities" revealed means of 3.6038 (group 1) and 2.3600 (AMIC). It is noted that the AMIC Clinic is located within DeWitt Army Community Hospital. The calculated  $F = 1.00$  (Note that the standard deviation of both groups was almost identical -- +1.498 for group 1 and +1.495 for AMIC). Of course  $F = 1.00$  is less than the critical  $F$  of 2.05. Hence the assumption must be made that  $\sigma_1^2 = \sigma_2^2$ . The  $S_p$  formula was used on the  $t$  test resulting in  $t_{101, .975} = 4.22$  which is greater than the critical  $t$  of 1.96. Therefore the null hypothesis was rejected and the alternative hypothesis that satisfaction with parking is higher at the family practice clinics is accepted.

The null hypothesis could not be rejected on the item pertaining to "satisfaction with the convenience of the operating hours". The means were 4.415 for group 1 and 4.4231 for AMIC. The  $t = -.04$  is in the acceptance region and the  $F = 1.65 < \text{critical } F = 2.05$ .

Similarly, the null hypothesis could not be rejected on the item inquiring about "satisfaction with the adequacy of the physical facilities inside the clinic (seating, decor, etc.)". The means were 4.3137 (group 1) and 4.0769 (group 2). The  $F = 1.35 < \text{critical } F = 2.05$ . The calculated

$t = 1.06$  is in the acceptance region for the null hypothesis.

The last item on this part of the questionnaire asked about "satisfaction with the general instructions received about the patient's medical care". The means were 4.5385 (group 1) and 4.1458 (group 2). The calculated  $F = 2.52$  exceeded the critical  $F$  of 2.3. The  $t = 2.10$  exceeds the critical  $t = 1.96$ . Hence the null hypothesis is rejected and the alternative hypothesis is accepted. This implies that satisfaction with instructions received at the family practice clinics is statistically higher than at the AMIC Clinic (see Appendix G).

Although seven of the questionnaire items were found to be "statistically significant", it should be noted that most means for both groups were greater than 4 and that the highest possible score was 5. These findings indicate that levels of satisfaction are very favorable at the AMIC as well as the family practice health clinics.

The  $t$  test was also run in two other modes. It must be noted here that the data from AMIC was combined with that of the two clinics in these two analyses. The  $t$  test was run first to determine levels of satisfaction of males and females. Appendix H shows SPSS file DEW. 5 and output file SV. 5 comparing the data as viewed by females and males. In this study the females were coded 2 and comprise group 1 in the printout shown at Appendix H. Males were coded 1 and comprise group 2. As can be noted the number of female respondents from all clinics comprise approximately 70% of the questionnaire responses. Only two of those were active duty females. Only two items were found to be statistically significant. Females

(group 1) rendered a mean of 4.4035 on the question of "satisfaction with medical records personnel" The mean for males (group 2) was 3.64. The F value of  $2.15 < \text{critical } F \text{ of } 2.20$ . Hence the  $S_p$  formula for the t test was used resulting in a  $t_{80,.975}$  of 2.85 which is greater than the critical  $t = 1.96$ . Thus the null hypothesis was rejected and the alternative hypothesis that females are more satisfied with medical records personnel than are males was accepted.

However, males were more satisfied with the adequacy of the physical facilities inside the clinic (seating, decor, etc.). The mean for males was 4.6129 while the mean for females was 4.0139. The calculated F of  $2.29 > \text{the critical } F = 2.20$ . The resulting t test indicates  $t = -2.95$  which is in the rejection region. Hence the null hypothesis is rejected and the alternative hypothesis of an actual difference in satisfaction is accepted.

It should be noted that most of the means are 4.0 or higher on most items. The item on "Satisfaction with the nurses" received the highest means (4.61 from females and 4.68 from males) while the item on parking facilities received the lowest means (2.94 from females and 3.13 from males). The reader is invited to refer to Appendix H for further analysis of this data.

Comparison of the data by race was the other mode that was run using the t test format. Appendix I shows the SPSS file DEW. 3 (t test) and the output file SV. 3 comparing satisfaction by race. Originally, responses from blacks were coded 1, whites 2, Mexican Americans 3, Oriental-Eurasians 4, and other 5. However, the need to contrast satisfaction levels of

whites with minorities necessitated the recoding of responses from blacks to code 6. Thus, in the data at Appendix I group 1 consists of all minority personnel who responded to the questionnaire (coded 3 or larger). Responses from white personnel comprise the second group (coded 2). As with the data on sex, all responses (AMIC and outlying health clinics) were included in the analysis. Minorities comprised 10.3% of those surveyed. Approximately 5 of the 11 minorities were black.

Only two of the items were found to be statistically significant using the t test. On the first question of "overall satisfaction with care" the mean for minorities was 3.6364 while the mean for whites (group 2) was 4.2967. The F of 2.23 was less than the critical F value of 2.53 from the F distribution chart and hence the  $S_p$  (pooled) t formula was used resulting in  $t = -2.03$  which is in the rejection region. Hence the alternative hypothesis is accepted and it is concluded that whites responding to the survey were more satisfied with care received than were minority respondents.

Consistent with this, the question on "satisfaction with the overall quality of care" resulted in mean scores of 3.5556 from minorities and 4.4318 from group 2. The  $F = 1.91$  is less than the critical F of 2.80, and the t test indicates  $t = -2.70$  which is in the rejection region. Hence, the alternative hypothesis is accepted and it is concluded that white respondents were more satisfied than were minority respondents with the overall quality of care.

Satisfaction with laboratory services received the highest mean



(4.5 for both groups) while satisfaction with parking facilities received the lowest means (2.1 and 3.1 for groups 1 and 2, respectively). Most other means were 4.0 or greater. Appendix I provides the complete set of comparative data by race.

Chi square, or the test of independence was also tested using the data collected from the questionnaire. The resulting charts are shown at Appendix J. The SPSS file is MAS. 3 while the output file is JU. 3. The data input file is IN. 1. The crosstabs system computes the chi square, degrees of freedom, the significance (i.e., probability). It displays the data in chart form.

AMIC Clinic data was coded 44 while data from North Post, South Post and DUSAA Health Clinics were coded 55. Charts on level of satisfaction were compiled for each of the 17 items on the questionnaire. In each cell of the chart appear the number of responses, the row percent, the column percent and the total percent for the entire chart. The chi square is calculated taking into account the fact that cells with zero responses will be combined with other cells in the chi square computations. This is done by the computer program.

The null hypothesis is that there is no relationship between two categories of data. The alternative hypothesis is that there is a relationship (although the nature of the relationship is not indicated). The chi square results indicated that there were three questionnaire items that had  $\chi^2$  values large enough to reject the null hypothesis. These items were

"Overall level of satisfaction" with a chi square of 14.0, 4 degrees of freedom and significance of .0073; "Satisfaction with parking facilities" with a chi square of 16.18, 4 df, and significance of .0028; and "Satisfaction with availability of appointments" with a chi square of 19.7, 4 df, and significance of .0006. For 4 degrees of freedom the chi square of 11.143 is the critical value. Those chi squares which are greater than 11.143 are considered to have a relationship between the items analyzed. The remaining items had chi square values less than the required critical value. Hence, the null hypothesis of "no relationship" could not be rejected.

The restrictions that chi square should not be used when 20% or more of the "expected" cell frequencies are less than five may have caused other questionnaire items to be calculated as "independent" when a relationship actually existed. These charts are all included for reference in Appendix J.

A chi square analysis comparing satisfaction with active duty, retired or dependent status appears at Appendix K. The SPSS file is MAS. 4. The output file is JU. 4. Only one item was found to be significant and it is the only page included from output file JU. 4. This item pertains to overall satisfaction with care. The calculated chi square of 26.35 exceeds the critical value of 23.337 (for 12 degrees of freedom at  $\chi^2_{.025}$  level). Hence the null hypothesis of no relationship is rejected and it is concluded that there is a relationship between active duty (or other) status and level of satisfaction with care received.

None of the chi square results based on comparison by sex was found

to be high enough to reject the null hypothesis. This computer output is not included in the appendices.

The last chi square analysis of this study compared race with levels of satisfaction. The SPSS file used for this analysis was MA. 1 found at Appendix F. The output file is JU. 2 which is shown at Appendix L. Only two items were found to be significant and therefore only these two pages of output file JU. 2 are included. The first of these pertains to "satisfaction with the availability of appointments." The calculated chi square of 32.0 exceeds the critical value of 23.337 (for 12 degrees of freedom at  $\chi^2_{.025}$  level). Hence  $H_0$  is rejected and it is concluded there is a relationship between race and level of satisfaction with appointments. The other item concerned "satisfaction with parking facilities". The calculated chi square of 39.7 exceeds the critical value chi square of 23.337. Hence the null hypothesis is rejected and it is concluded there is a relationship between race and satisfaction with parking facilities. The small number of minorities in the study resulted in numerous cell frequencies of zero, thus violating one of the cautions in using the chi square test.

Nevertheless, the tables shown at Appendix J, K, and L provide insights as to the percentage of respondents (by clinic, status, or race) who were satisfied or not so satisfied with their care.

#### Findings - Staff Questionnaire

Patient satisfaction is important in evaluating care rendered in hospitals and clinics. Also important are the morale and satisfaction levels of physicians and other staff assigned to work in the facilities.

In this study the staff were asked to complete a questionnaire on the advantages and disadvantages of having Family Practice panels in health clinics located away from hospital buildings. Twenty-seven total replies were received from the physicians and others assigned to the three health clinics. A copy of the open-ended questionnaire is shown at Appendix B.

As was mentioned in the introductory chapter of this study, staff morale has often been a problem in many of the troop clinics where troops were the only patients treated.

The results of this survey indicate that 20 of 26 respondents (76.9%) were "very satisfied" with their present assignment at the health clinics. Only four of the 26 indicated they were "somewhat satisfied" while only two of the 26 said they were "somewhat dissatisfied". One reply was missing. No staff respondent marked that he was "very unsatisfied". (See Appendix B, item 11.)

Sixteen of 22 (72.7%) respondents indicated that they would like to be reassigned (PCS) to a small health clinic such as the one in which they presently work (item 10). One physician remarked that it was "good duty". Two of the 22 said that it would not matter where they were reassigned so long as they could work in their military occupational specialty (MOS). Four of 22 said they would not like to be reassigned to a small health clinic. One of these was a physician who stipulated that he would like to be reassigned to a small health clinic if staffing were adequate. (However, on another item staff members praised the staffing levels present in the health clinics.)

Item two of the questionnaire asked the staff members what they personally liked the most about their assignment to the Family Practice health clinic. Nine respondents (33%) commented that they felt they had more local control of the clinic and were more self sufficient. Some of these 9 also mentioned that they have more control over the scheduling of patients.

Seven staff members (25.9%) said they felt there is more personal treatment of the patients in the small clinic setting than is possible in a larger hospital setting. Six staff members said they felt there was a more "comfortable" or more informal atmosphere at the clinic than at the typical Army hospital. A pleasant and friendly atmosphere were also mentioned by some of these six respondents.

A good working relationship among the staff (team work) and/or high morale were mentioned by four staff members.

Four staff members liked the hours and/or the fact that they do not have to have rotating shifts.

Three medics mentioned that they were allowed to do a wider range of functions and skills in the clinic than had been the case when they worked in a ward environment. Three medics mentioned that they liked working with the physician's assistant (PA) from whom they learned a great deal of clinical and administrative skills.

Two respondents said they felt that the health clinics were less congested which was advantageous to them personally. One staff member praised the adequacy of support personnel compared with his experiences in the hospital environment.

The third questionnaire item asked what the health clinic staff members liked least about being assigned to the facility. Six respondents (22%) criticized the fact that they had to use their own gas to pick up and deliver lab slips, supplies, and mail.

Two physicians mentioned that the distance to the hospital makes care of inpatients very time consuming during duty hours. Three staff members said they felt they lacked information on what was going on at the hospital. Two respondents criticized the early opening hours (0630). Two answers said that the lack of x-ray and a laboratory at the clinic was a disadvantage for them.

One physician mentioned that it was difficult to get leave because in his absense the doubled workload fell on the other physician.

One medic said he felt that the troops should have a clinic of their own. He also added that he was used to having the afternoons to "take care of clinic personnel training and cleaning of the clinic".

Two respondents said they disliked most seeing the troops try to use sick call as a way of avoiding physical training. Only one reply criticized the pulling of clinic personnel by the hospital or the 15th CSH for details. One respondent disliked the 90 day rotation schedule (at South Post Health Clinic) which required constant training of new staff.

Item four of the questionnaire asked the staff members would they rather be assigned to the DeWitt Hospital building or to their present health clinic. Of 23 responding to this item, 21 (91.3%) indicated they would prefer their health clinic assignment. The remaining two responses

said that an assignment to either location would be fine. No respondent indicated a preference for duty in the hospital building. Four staff members did not respond to the question.

Item six asked what advantages that care at the health clinic offered to the patient, in the opinion of the staff respondent.

Ten respondents (37%) said they felt the clinic offered quicker availability of appointments which enabled the patient to get to see the physician more quickly than he would at the hospital. Six staff members said they felt the small clinic setting offers more personalized care to the patients. Four staff members said they felt that the availability of pharmaceuticals in the clinics provided quicker and better service to most patients. Four staff members praised parking as being advantageous for the patient. Two respondents said the health clinics were "more convenient" for patients.

Item seven asked about the disadvantages imposed on patients at the health clinics. Most of these responses pertained to the lack of a full range of services at the clinic. Fifteen (55.5%) said they felt that the lack of x-ray capability in the clinic imposed a burden on patients. One of the physicians who was included among the 15 citing this noted that only 1-3% of patients need to go to USDACH for x-rays. Eight respondents said that the necessity of some patients (about 10% or less) having to go to USDACH for prescription services was a potential disadvantage for patients.

Eight respondents also mentioned that having to go to USDACH for laboratory work was also a disadvantage for some patients. Lack of EKG equipment was mentioned as a disadvantage by two respondents. One physician

mentioned that when a physician is on leave then only one physician remains to see patients. This is a disadvantage for the patients who may have longer waiting times before they can receive care from the physician. One staff member said that the time required to complete flight physicals in the morning (DUSAA only) could be a disadvantage to patients waiting for care on those mornings.

Item five asked how the staff members felt care at the clinic compares with the care patients receive at a hospital facility such as USDACH.

Twelve respondents said they felt the care of the patient is more individualized in the health clinic setting while five staff members said they felt the care was more efficient in the health clinic setting. Two said that the clinic setting provided more time for the patient to be seen by the physician. Ten staff members said they thought the care was "the same".

Item eight asked the staff members if they thought that having family practice situated in troop clinics was a good idea. Seventeen of the 18 responding to this item said they thought this was a good idea. However, three staff members said they felt that having the Family Practice patients seen in the same clinics as the troops may "not be fair to the troops" because Family Practice patients are often "milling about" long before the troops have all left from morning sick call. Two respondents said they felt the present system makes better use of physician's time and the facilities, as well as the other staff's time.

Item nine asked whether the respondent would rather be assigned to



a troop clinic that cared only for active duty troops. Of the 25 people responding to this item, 17 (68%) said they would not like to be assigned to a troop clinic that only cared for active duty troops. Six of these noted that they like the variety of patients that they see in the Family Practice clinic to which they are presently assigned. Three respondents said it would not matter to what type of clinic they were assigned. Five respondents (20%) said they would prefer duty in a troop health clinic that cares only for active duty troops. However, two of these five stated they preferred the small Family Practice clinic but did not like to see it overlap with the troops' "sick call".

One physician noted that he would not like to be assigned to a troop health clinic because "I am not a GMO". Another physician said he would not like a troop clinic assignment because it "would be totally inappropriate for a board certified family physician to be utilized in a troop clinic setting."

#### Analysis of Data in Comparison with Criteria

The first criteria mentioned was that ideally the mean of the responses on the questionnaire should be 4.0 (mostly satisfied) or higher (very satisfied) in order to consider the questionnaire item to reflect sufficient satisfaction on the part of patients responding to the item. In almost all of the t test analysis (by clinic) the means for both AMIC and the outlying health clinics approached or exceeded 4.0 (see Appendix G).

The second criteria specified that t test results should be large enough to reject the null hypothesis (of no difference between groups) in order to serve as an indicator that there were indeed significant differences

in the groups. For six of the items statistically significant results on the t test indicated that patients treated at the outlying clinics were more satisfied with care than patients receiving care at AMIC. These satisfaction levels were those pertaining to overall satisfaction, satisfaction with physicians, nurses, availability of appointments, parking facilities, and satisfaction with the general instructions received concerning the patient's care. It should be noted that the item on parking had means of 3.6 (outlying clinics) and 2.36 (AMIC) which did not meet the desired mean of 4.0 for either group. The item on satisfaction with receptionists was also found to be statistically significant, with patients in AMIC more satisfied than the patients treated at the outlying clinics.

The next criteria stated that the system selected should maximize patient and staff morale to the maximum extent possible. The favorable responses on overall satisfaction indicated good patient morale at both the outlying clinics and at AMIC. The responses to the open ended questions by both patients and staff reflected good to excellent morale.

Convenience for patients and staff was the next criteria item listed. Responses indicate that the outlying clinics are adequately convenient. It is recognized that the lack of x-ray, pharmacy, and laboratory support at the outlying clinics will cause some inconvenience to some patients on some occasions.

Finally, the last item for evaluation stated that the system selected should use both physician and ancillary staff effectively. Subjective responses by the staff members indicate this criteria is being met in the outlying Family Practice clinics.

### III. CONCLUSIONS AND RECOMMENDATIONS

Results from patient satisfaction questionnaires administered throughout USDACH in 1980 and early 1981 indicated that in general most patients tended to rate the care they received very favorably. The findings of this study reinforce the previous favorable results. It is remarkable that seven of the items on the patient questionnaire were found to be statistically significant using the t test since most of the means of the data analyzed were between 4 (mostly satisfied) and the maximum score of 5 (very satisfied).

Perhaps more remarkable are the very enthusiastic responses from the staff members assigned to the three health clinics surveyed. Although the open ended staff questionnaire was not analyzed statistically, it is evident that the vast majority of the health clinic staff personnel are well satisfied with duty in the Family Practice health clinics at Fort Belvoir and would not prefer duty in the troop clinic environment where only active duty personnel are treated. Interestingly, 21 of 23 respondents indicated a preference for duty in the Family Practice health clinic setting rather than at the hospital building. Two more said either assignment would be acceptable. (The remaining 4 respondents did not answer this item.) These results stand in strong contrast to the negative attitudes expressed by many staff members who were assigned to troop (only) clinics years ago.

It is the conclusion of this researcher that the use of Family Practice physicians in the outlying health clinics is a viable model of health care delivery. Indeed, the alternative of using Family Practice physician in these clinics seems to have improved the morale of staff and patients alike without sacrificing the quality of care rendered.

Since the US Army is training Family Practice physicians in residency programs, it seems that the assignment of the graduates of these programs in health clinics would be an excellent utilization of their skills and training. The physicians seem to like the autonomy of working in these clinics. Staff and patients also like this system, according to the results of this study.

It is therefore recommended that this alternative of using Family Practice physicians in the outlying clinics be continued at Fort Belvoir so long as sufficient numbers of Family Practice physicians are assigned to enable the staffing of the clinics with Family Practice physicians.

It is further recommended that the use of Family Practice physicians in health clinics at other MEDDAC's should also be considered if sufficient Family Practice physicians can be assigned to support the mission. In times of increasing physician specialization and decreasing numbers of GMO's in the military, the use of Family Practice physicians in the health clinics seems to be an extremely viable alternative.

It is recommended that the physicians in charge of each clinic surveyed in this study review the findings of this study to determine if what changes could be made to improve the system.

To facilitate this process, a copy of this study will be provided to the above individuals as well as to the Commander and Executive Officer of the hospital.

Expansion of operating hours and improvements to parking facilities are two areas that might be examined for changes that could improve patient satisfaction. Changing the policy on reimbursement for mileage of privately owned vehicles (POV) to allow for reimbursement of staff should also be examined as this could help to improve staff morale. Careful monitoring by supervisors should prevent potential abuses of POV claims for reimbursement.

If the system of health care described in this study is adopted at other MEDDAC's, it is recommended that a follow on study be conducted to determine to what extent the results of this study are replicated.

APPENDIX A

OUTPATIENT QUESTIONNAIRE  
(HSC FORM 128 R, 1 OCT 80)

# OUTPATIENT QUESTIONNAIRE






(APC Program Document)

338

CLINIC \_\_\_\_\_ HSC MTF \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
(CC 30-31) (CC 32-33)

PREFER NOT TO COMPLETE THIS QUESTIONNAIRE AT THIS TIME \_\_\_\_\_ (CC 34)

INFORMATION FOR THIS QUESTIONNAIRE WILL HELP US PROVIDE THE BEST POSSIBLE MEDICAL CARE TO INSURE THE ACCURACY OF THIS SURVEY. IT IS MOST IMPORTANT THAT YOU ANSWER EACH QUESTION WHICH APPLIES TO TODAY'S VISIT. IT WILL TAKE ONLY ABOUT FIVE MINUTES TO COMPLETE THE QUESTIONNAIRE. ALL RESPONSES WILL BE HELD IN STRICTEST CONFIDENCE.

PLACE AN "X" IN THE APPROPRIATE BOX	VERY SATISFIED 	SOMEWHAT SATISFIED 	DOES NOT APPLY 	SOMEWHAT DISSATISFIED 	VERY UNSATISFIED 
<b>HOW SATISFIED WERE YOU WITH</b>					
1. THE PHYSICIANS?					
2. THE PHYSICIAN'S ASSISTANTS?					
3. THE NURSE PRACTITIONERS?					
4. THE NURSES?					
5. THE ENLISTED NURSING STAFF?					
6. THE CIVILIAN NURSING STAFF?					
7. THE AMOSIST PERSONNEL?					
<b>HOW SATISFIED WERE YOU WITH</b>					
8. THE APPOINTMENT PERSONNEL?					
9. THE MEDICAL RECORDS PERSONNEL?					
10. THE RECEPTIONISTS?					
11. THE LABORATORY STAFF?					
12. THE X RAY STAFF?					
13. THE PHARMACY STAFF?					
<b>HOW SATISFIED WERE YOU WITH</b>					
14. THE PARKING FACILITIES?					
15. THE CLINIC'S PHYSICAL FACILITIES?					
16. THE PROVISIONS MADE TO INSURE YOUR PRIVACY?					
17. THE HOURS THE CLINIC WAS OPEN?					
18. THE PLACE/PLACES TO PRESENT SUGGESTIONS OR COMPLAINTS?					
19. THE GENERAL INSTRUCTIONS YOU HAVE RECEIVED?					
<b>HOW SATISFIED WERE YOU WITH THE WAITING TIME:</b>					
20. TO OBTAIN AN APPOINTMENT?					
21. AT THE MEDICAL RECORDS ROOM?					
22. BEFORE RECEIVING TREATMENT?					
23. TO HAVE AN X RAY OR LABORATORY TEST TAKEN?					
24. AT THE PHARMACY?					
25. IN THE EMERGENCY ROOM?					

AGE ☐ ☐  
(CC 26-27)

SEX ☐ Male  
(CC 28) ☐ Female

STATUS ☐ Active Duty ☐ Active Duty Dependent  
(CC 29) ☐ Retired ☐ Retired Dependent  
☐ Other (Civ employee, civ emergency, etc.)

IF YOU HAVE ANY ADDITIONAL COMMENTS OR SUGGESTIONS, PLEASE WRITE THEM ON THE REVERSE SIDE. PLEASE DEPOSIT YOUR COMPLETED QUESTIONNAIRE IN THE BOX PROVIDED OR FOLD AND RETURN TO THE PERSON WHO GAVE IT TO YOU. THANK YOU FOR TAKING TIME TO ANSWER THIS QUESTIONNAIRE.

B

APPENDIX B

QUESTIONNAIRE FOR STAFF OF HEALTH CLINICS



QUESTIONNAIRE FOR  
STAFF OF HEALTH CLINICS

Major Svetlik, MSC, Administrative Resident, is conducting a study on the advantages and disadvantages of having "family practice" panels in health clinics located away from hospital buildings. Your candid opinions will greatly assist this study. All replies are anonymous.

1. To which health care facility are you presently assigned?

☐ NORTH POST      ☐ SOUTH POST      ☐ DUSAA      ☐ OTHER  
(Specify)

2. What do you personally like most about working and being assigned to this facility? (Please discuss the advantages that you find for yourself.)

3. What do you personally like least about working and being assigned to this facility? (Please discuss the disadvantages that you find for yourself.)

4. Would you prefer to be assigned to the DeWitt Hospital building or to this health care clinic? Why?

5. How do you feel the care provided at this health clinic compares with the care patients receive at a hospital facility building such as DeWitt? Why?

6. What advantages do you feel that care at this health clinic facility offers to patients?

7. What disadvantages does care at this health clinic facility impose on patients?

8. Do you think that having "family practice" situated in troop clinics (or health clinics) is a good idea? Why or why not?

9. Would you prefer to be assigned to a troop health clinic that did not have family practice physicians and that only cares for active duty members? Why or why not?

10. In a future assignment would you like to be reassigned (PCS) to a small family practice health clinic such as this one? Why or why not?

11. How satisfied are you with your present assignment at this health clinic?

☐ VERY SATISFIED

☐ SOMEWHAT DISSATISFIED

☐ NOT SURE

☐ SOMEWHAT SATISFIED

☐ VERY DISSATISFIED

12. Other comments:

APPENDIX C

PATIENT QUESTIONNAIRE AND COVER LETTER  
(MEDDAC FORM 901)

DEPARTMENT OF THE ARMY  
Headquarters, US Army Medical Department Activity  
Fort Belvoir, Virginia 22060

AHDCM-XO

11 February 1981

Dear Patient:

We at US DeWitt Army Community Hospital are attempting to evaluate ourselves in order to provide the best possible services to our patients. We are interested in your opinions of our services. We are particularly interested in your satisfaction with the care you receive through Family Practice and/or elsewhere at US DeWitt Army Community Hospital.


We are asking you to complete the attached anonymous questionnaire. Please be honest and candid in answering each question. Any adult who is eligible for military health care may complete this questionnaire.

All of the doctors involved in this study have agreed to participate in this survey. They are very interested in ways to improve doctor-patient relationships and ways to improve other services.

Please mail the completed questionnaire to US DeWitt Army Community Hospital in the envelope provided.

Thank you for your interest and cooperation.

1 Incl  
as

  
BOBBY B. EMONS  
Colonel, MSC  
Executive Officer

PATIENT QUESTIONNAIRE  
(Place an X in the appropriate box)

Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Unsatisfied	Not Sure	Not Applicable	
						1. The physicians?
						2. The nurses?
						3. Other medical personnel? (Enlisted and civilian nursing staff, physicians assistants, etc)
						4. The receptionists?
						5. The quality of Health Care?
						6. The appointment personnel?
						7. Availability of appointments?
						8. Pharmacy services provided at this location?
						9. The medical records personnel?
						10. The x-ray staff?
						11. The laboratory staff?
						12. Convenience of the location of this facility?
						13. The parking facilities?
						14. Convenience of the operating hours of this facility?
						15. Adequacy of clinics inside physical facilities? (Seating, decor, etc)
						16. The general instructions you have received about your medical problems?

17. What do you like best about your health care facility and/or the care you receive there?
18. What do you like least about your health care facility and/or the care you receive there?
19. What would you change to improve the services and/or care you receive at your health care facility?
20. Please add comments on any of items 1-16 above, if you wish.

1. SEX: ☐ MALE ☐ FEMALE

2. AGE:

3. STATUS: ☐ Active Duty Dependent ☐ Retired Dependent  
☐ Active Duty ☐ Retired  
☐ Other

4. SPONSOR'S GRADE (Circle): E-1 E-2 E-3 E-4 E-5 E-6 E-7 E-8 E-9  
WO-1 CWO-2 CWO-3 CWO-4  
O-1 O-2 O-3 O-4 O-5 O-6 O-7 O-8 O-9

5.  Number of persons in your immediate family (including yourself).

6. RACE:  
☐ BLACK ☐ MEXICAN AMERICAN  
☐ WHITE ☐ OTHER (Please Specify)

7. Are you a member of a "family practice" panel? ☐ YES ☐ NO

8. If yes, which clinic?

☐ North Post ☐ South Post ☐ DUSAA ☐ DeWitt Army Hospital

9. Do you usually see the same doctor each time you come for a visit?

☐ YES ☐ NO

10. Over all, how satisfied are you with your health care here?

☐ Very Satisfied ☐ Somewhat Dissatisfied  
☐ Somewhat Satisfied ☐ Very Unsatisfied  
☐ Not Sure

54

0029

APPENDIX D

TDA AUTHORIZATIONS FOR NORTH POST,  
SOUTH POST, AND DUSAA HEALTH CLINICS





APPENDIX E

INPUT DATA - CODED (FILE IN.1)

UZH020 MISC

IN

1 LIBS

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55	1	63	4	1	7	1	2	1	1	1	4	4	8	3	2	4	2	5	5	8	2	5	5	5	5	4	
55	2	28	1	1	6	5	2	1	2	1	4	5	5	4	4	5	2	4	5	4	8	8	8	5	5	3	
55	2	33	1	1	5	5	2	1	2	1	5	5	5	5	5	5	5	5	5	8	5	5	5	5	5	5	
55	2	25	1	3	2	4	2	1	2	1	4	4	5	5	3	4	3	5	3	4	9	9	4	4	4	2	
55	2	36	1	1	8	5	2	1	2	1	5	5	4	4	4	5	4	5	5	9	8	8	5	5	5	5	
55	1	32	2	3	2	4	2	1	2	1	4	4	4	4	2	5	1	1	2	4	5	4	5	2	2	5	
55	2	35	1	1	7	5	2	1	2	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
55	2	70	4	3	6	1	2	1	2	1	5	5	5	4	4	5	9	4	5	5	5	5	4	5	5	5	
55	1	47	2	3	6	4	2	1	2	1	4	4	4	2	4	2	4	4	3	4	9	9	5	5	4	5	
55	2	41	3	3	5	5	2	1	2	1	5	5	5	5	1	5	1	9	1	2	5	5	5	2	5	4	
55	2	41	1	3	5	4	2	1	2	1	4	4	4	4	2	4	2	1	1	1	1	1	5	5	5	2	
55	2	45	1	3	5	4	2	1	3	1	5	5	5	5	5	5	5	4	8	5	5	5	5	5	5	5	
55	1	39	2	3	4	4	2	1	3	1	5	5	5	5	5	5	5	4	5	5	3	5	4	4	4	5	
55	2	34	1	3	5	3	2	1	3	1	5	5	5	5	5	5	4	4	5	5	5	5	5	5	5	4	
55	1	39	2	3	4	4	2	1	3	1	4	4	4	5	5	4	5	5	2	8	4	5	5	5	4	4	
55	2	28	1	3	4	4	2	1	3	1	4	4	5	5	5	4	8	5	1	8	8	8	4	1	4	4	
55	2	38	1	3	5	4	2	1	3	1	5	4	5	2	2	5	5	5	8	5	8	8	5	4	4	2	
55	1	68	4	3	5	3	2	1	3	1	5	4	5	5	5	4	4	4	9	9	4	5	5	5	5	4	
55	1	48	4	3	5	2	2	1	3	1	5	5	5	5	8	5	2	2	4	2	5	5	2	4	5	5	
55	2	42	1	3	5	3	2	1	3	1	5	5	5	5	5	5	5	5	9	5	8	8	5	5	5	5	
55	2	34	1	2	2	4	2	1	3	1	4	4	4	4	5	4	5	5	5	8	5	4	5	5	5	4	
55	1	54	4	3	5	3	6	1	3	1	5	5	9	9	5	5	5	9	8	9	5	9	5	5	5	5	
55	2	37	1	3	4	5	2	1	3	1	5	5	5	5	5	5	2	1	5	5	8	8	5	2	5	4	
55	2	33	1	3	5	4	2	1	3	1	5	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	
55	2	30	1	1	5	4	2	1	3	1	4	4	4	4	4	4	4	4	4	2	4	5	2	4	4	4	
55	2	42	1	3	5	7	2	1	3	1	4	4	8	4	4	4	5	4	4	4	4	4	2	2	4	4	
55	1	36	2	2	3	5	2	1	3	1	4	5	5	4	4	5	4	4	4	4	4	4	5	2	5	5	
55	1	43	2	2	3	4	9	1	3	2	4	5	5	4	4	4	1	1	5	8	5	8	1	5	5	4	
55	2	23	1	1	5	3	2	1	3	1	4	4	4	4	4	4	5	5	2	2	5	4	4	1	5	4	

APPENDIX F

SPSS FILE MA.1 (CROSSTABS/CHI SQUARE)

MA 1 LIBS AT: 04/16/81 12:23:03 JOB: 37326

PRINT BACK NO  
RUN NAME STUDY OF PATIENT SATISFACTION  
FILE NAME IN.1, FILES FROM AM,NR,SP,DA  
VARIABLE LIST CLINIC,SEX,AGE,STATUS,CATEG,GRADE,  
FAMSIZ,RACE,INFP,CLILOC,SAMDR,SATISF,  
LIKEMD,NURSES,OTHERS,RECEPT,QUAL,APTPER,  
AVAPT,PHARM,MKPER,XRAY,LAB,CONVEN,PARK,  
OPHRS,INFAC,GINSTR  
INPUT FORMAT FIXED (F2.0,1X,F1.0,1X,F2.0,1X,  
F1.0,1X,F1.0,23(1X,F1.0))  
INPUT MEDIUM DISK  
N OF CASES UNKNOWN  
VALUE LABELS CLINIC, (44) AMIC  
(55) COMBINED DATA FROM NR SP DA/  
SEX, (1) MALE (2) FEMALE/  
STATUS, (1) ACTIVE DUTY DEPENDENT  
(2) ACTIVE DUTY (3) RETIRED DEPENDENT  
(4) RETIRED (5) OTHER/  
CATEG, (1) ENLISTED (2) WARRENT  
(3) COMMISSIONED OFFICER/  
RACE, (2) WHITE (3) MEXICAN-AMERICAN  
(4) ORIENTAL-EURASIAN (5) OTHER  
(6) BLACK/  
INFP, (1) YES (2) NO/  
CLILOC, (1) NORTH POST (2) SOUTH POST  
(3) DUSAA (4) AMIC (5) OTHER/  
SAMDR, (1) YES (2) NO/  
SATISF, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
LIKEMD, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
NURSES, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
OTHERS, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
RECEPT, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
QUAL, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
APTPER, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
AVAPT, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/  
PHARM, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
(3) NOT SURE (2) SOMEWHAT DISSAT.  
(1) VERY UNSATISFIED/

MRPER, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 XRAY, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 LAB, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 CONVEN, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 PARK, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 OPHRS, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 INFAC, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 GINSTR, (5) VERY SATISFIED (4) SOMEWHAT SAT.  
 (3) NOT SURE (2) SOMEWHAT DISSAT.  
 (1) VERY UNSATISFIED/  
 MISSING VALUES STATUS (8,9)/ FAMSIZ TO GINSTR (8,9)/  
 VAR LABELS CLINIC CLINIC/ SEX SEX/  
 AGE AGE/ STATUS TYPE OF ACTIVE  
 DUTY-RETIRED-ETC STATUS/  
 CATES ENL-WO-OFF/ GRADE GRADE/  
 FAMSIZ FAMILY SIZE/  
 RACE RACE/  
 INFF IN FAMILY PRACTICE?/  
 CLILOC CLINIC LOCATION/  
 SAMDR SEE SAME DOCTOR EACH VISIT?/  
 SATISF OVERALL LEVEL OF SATISFACTION/  
 LIKEMD SATISFACTION WITH DOCTOR/  
 NURSES SATISFACTION WITH NURSES/  
 OTHERS SATISFACTION WITH OTHER STAFF/  
 RECEPT SATISFACTION WITH RECEPTIONISTS/  
 QUAL OVERALL QUALITY OF CARE/  
 APTPER SATISFACTION WITH APPOINTMENT  
 PERSONNEL/  
 AVAPT AVAILABILITY OF APPOINTMENTS/  
 PHARM SATISFACTION WITH PHARMACY  
 SERVICES PROVIDED/  
 MRPER SAT WITH MEDICAL RECORDS  
 PERSONNEL/  
 XRAY SAT WITH XRAY SERVICES/  
 LAB SAT WITH LAB SERVICES/  
 CONVEN CONVENIENCE OF LOCATION  
 OF FACILITY/  
 PARK SAT WITH PARKING FACILITIES/  
 OPHRS SAT WITH OPERATING HOURS/  
 INFAC ADEQUACY OF PHYSICAL

	FACILITIES-INSIDE/
	GINSTR SAT WITH GENERAL INSTRUCTIONS
	ABOUT MEDICAL PROBLEM/
PRINT FORMATS	CLINIC (1)/ SEX (1)/ AGE (2)/
	STATUS (1)/ CATEG (1)/ GRADE (1)/
	FAMSIZ TO GINSTR (3)/
CROSS TABS	TABLES=SATISF TO GINSTR BY RACE
OPTIONS	7.9
STATISTICS	1
READ INPUT DATA	
FINISH	

10.1

APPENDIX G

SPSS FILE DEW.4 (T-TEST) AND OUTPUT FILE SV.4 COMPARING "CLINICS"



DEW 4 LIB\$ AT: 04/16/81 12:36:22 JOB: 38595

GINSTR SAT WITH GENERAL INSTRUCTIONS  
ABOUT MEDICAL PROBLEM/  
PRINT FORMATS CLINIC (1)/ SEX (1)/ AGE (2)/  
STATUS (1)/ CATEG (1)/ GRADE (1)/  
FANSIZ TO GINSTR (3)/  
T-TEST GROUPS=CLINIC (54)/VARIABLES=SAFISF TO GINSTR  
READ INPUT DATA  
FINISH

SV 4 LIB\$ AI: 04/16/81 12:39:51 JOB: 39J21

STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES

04/16/81

PAGE 1

SPSS FOR INFONET 'CSTS' RELEASE 7.2.2, DECEMBER 10, 1979

DEFAULT SPACE ALLOCATION.. . . . 23 TRANSFORMATIONS  
WORKSPACE 3584 WORDS 42 RECODE VALUES + LAG VARIABLES  
TRANSPACE 512 WORDS 44 IF/COMPUTE OPERATIONS

PRINT BACK NO

6. THE INPUT FORMAT PROVIDES FOR 28 VARIABLES. 24 WILL BE READ  
IT PROVIDES FOR 1 RECORDS ('CARDS') PER CASE. A MAXIMUM OF 57 COLUMNS ARE USED ON A RECORD.

\*\*\*\*\* T-TEST PROBLEM REQUIRES 122 WORDS OF WORKSPACE \*\*\*\*\*

AFTER READING 106 CASES FROM SUBFILE IN.1 . END OF FILE WAS ENCOUNTERED ON LOGICAL UNIT # 6

## STUDY OF PATIENT SATISFACTION

04/16/81

PAGE 2

FILE IN-1 (CREATION DATE = 04/16/81) FILS FROM AM-NR-SP-04

## T - T E S T

GROUP 1 - CLINIC GE 54.0 (N=10, D.F.=55)  
 GROUP 2 - CLINIC LT 54.0 (N=10, D.F.=44)

34.0 (Pooled) = 47																
VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F		2-TAIL PROB.		T		DEGREES OF FREEDOM		T		SEPARATE VARIANCE ESTIMATE	
					VALUE	CRITICAL F	VALUE	CRITICAL F	VALUE	CRITICAL F	VALUE	CRITICAL F	VALUE	CRITICAL F		
SATISF OVERALL LEVEL OF SATISFACTION																
GROUP 1	52	4.5305	.576	.080	4.055	.000	3.29	101	.001	3.27	100.47	.002	3.27	100.47	.002	.002
GROUP 2	51	3.9020	1.269	.168	4.055	.000	3.29	101	.001	3.27	100.47	.002	3.27	100.47	.002	.002
LIKEMO SATISFACTION WITH DOCTOR																
GROUP 1	52	4.6154	.599	.083	2.93	.000	2.21	95	.030	2.13	68.65	.037	2.13	68.65	.037	.037
GROUP 2	45	4.2444	1.024	.153	2.93	.000	2.21	95	.030	2.13	68.65	.037	2.13	68.65	.037	.037
NURSES SATISFACTION WITH NURSES																
GROUP 1	43	4.1674	.627	.065	3.04	.001	2.12	82	.037	2.10	63.09	.040	2.10	63.09	.040	.040
GROUP 2	41	4.4878	.746	.116	3.04	.001	2.12	82	.037	2.10	63.09	.040	2.10	63.09	.040	.040

Critical Z = ±1.960

## STUDY OF PATIENT SATISFACTION

04/16/81

PAGE

22

FILE IN-1 (CREATION DATE = 04/16/81) FILES FROM AM,MR,SP,DA

VARIABLE		NUMBER OF CASES		MEAN		STANDARD DEVIATION		STANDARD ERROR		F 2-TAIL VALUE PROB.		T DEGREES OF FREEDOM		T VALUE		SEPARATE VARIANCE ESTIMATE		2-TAIL PROB.	
GROUP 1 - CLINIC GE		54.0																	
GROUP 2 - CLINIC LT		54.0																	
OTHERS		SATISFACTION WITH OTHER STAFF																	
GROUP 1		51		4.3529		.868		.122		1.19		.541		.03		.978		95	
GROUP 2		46		4.3478		.944 ✓		.140		2.11		.001		-2.58		.011		97	
RECEPT		SATISFACTION WITH RECEPTIONISTS																	
GROUP 1		48		4.0625		1.278 ✓		.185		2.11		.001		-2.58		.011		97	
GROUP 2		51		4.0078		.777		.109		2.11		.001		-2.58		.011		97	
QUAL		OVERALL QUALITY OF CARE																	
GROUP 1		51		4.3098		.784		.110		1.93		.024		1.78		.078		96	
GROUP 2		47		4.1702		1.090 ✓		.159		2.11		.001		-2.58		.011		97	
APTPR		SATISFACTION WITH APPOINTMENT																	
GROUP 1		50		4.0400		1.340		.189		1.22		.260		1.38		.170		96	
GROUP 2		40		3.0458		1.480 ✓		.214		2.11		.001		-2.58		.011		97	

00

1.78

critical = 1.78

PAGE 3 of 3

69

## STUDY OF PATIENT SATISFACTION

04/16/61

PAGE

32

FILE IN.1 (CREATION DATE = 04/16/61) FILES FROM AM,MR,SP,DA

VARIABLE		NUMBER OF CASES		MEAN		STANDARD DEVIATION		F VALUE		2-TAIL PROB.		T VALUE		DEGREES OF FREEDOM		P-VALUE		SEPARATE VARIANCE ESTIMATE	
GROUP 1 - CLINIC GE		34.0																	
GROUP 2 - CLINIC LT		34.0																	
X-RAY		SAT WITH XRAY SERVICES																	
GROUP 1	33	4.5555	1.003	✓	.175	1.20	.612	.06	63	.953	.06	67.77	.003						
GROUP 2	32	4.5313	.915		.162	1.23													
LAB		SAT WITH LAB SERVICES																	
GROUP 1	37	4.5405	.570	✓	.143	1.52	.230	-.23	69	.821	-.23	68.00	.003						
GROUP 2	34	4.5294	.766		.121	1.53													
CONVEN		CONVENIENCE OF LOCATION																	
GROUP 1	50	4.5600	.688		.097	1.66	.084	1.26	94	.210	1.26	84.78	.015						
GROUP 2	46	4.4585	.887	✓	.131	2.0													
PARK		SAT WITH PARKING FACILITIES																	
GROUP 1	53	3.6038	1.498	✓	.206	1.00	.991	4.22	✓ 101	.000	4.22	100.67	.000						
GROUP 2	50	2.5600	1.495		.211	2.05													

2/16

## STUDY OF PATIENT SATISFACTION

04/16/81

PAGE 4

FILE IN-1 CREATION DATE = 04/16/81 FILES FROM AMNH,SP,DA

GROUP 1 - CLINIC GE 54.0  
GROUP 2 - CLINIC LT 54.0

## T - T E S T

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE				SEPARATE VARIANCE ESTIMATE			
					F VALUE	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM	T VALUE	2-TAIL PROB.	DEGREES OF FREEDOM	
OPPRS SAT WITH OPERATING ROOMS												
GROUP 1	53	4.415	1.027 ✓	.141								
GROUP 2	52	4.423	1.111	.111	1.65	.077	-0.04	103	.965	-0.04	99.02	.955
					2.05							
INFAC SCHEDULE OF PHYSICAL												
GROUP 1	51	4.337	1.140	.147								
GROUP 2	52	4.076	1.218 ✓	.109	1.35	.240	1.06	101	.293	1.06	99.34	.283
					2.05							
CLINSTR SAT WITH GENERAL INSTRUCTIONS												
GROUP 1	52	4.570	.895	.097								
GROUP 2	40	4.155	1.111 ✓	.160	2.52	.001	2.13	98	.035	2.10 ✓	74.04	.034
					2.02							

APPENDIX H

SPSS FILE DEW.5 (T-TEST) AND OUTPUT FILE SV.5 COMPARING "SEX"



DEW 5 LIB\$ AI: 04/16/81 12:37:40 JOB: 38920

GINSTR SAT WITH GENERAL INSTRUCTIONS  
ABOUT MEDICAL PROBLEM/  
PRINT FORMATS CLINIC (1)/ SEX (1)/ AGE (2)/  
STATUS (1)/ CATEG (1)/ GRADE (1)/  
FAMSIZ TO GINSTR (3)/  
T-TEST GROUPS=SEX (2)/VARIABLES=SATISF TO GINSTR  
READ INPUT DATA  
FINISH

STUDY OF PATIENT SATISFACTION SV 5 LINES AT: 04/16/81 12:39:04 JOB: 39238 04/16/81

FILE IN:1 (CREATION DATE = 04/16/81) FILES FROM AMNR.SP.DA

GROUP 1 - SEX GE 2.0 (F)  
GROUP 2 - SEX LT 2.0 (M)

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE				SEPARATE VARIANCE ESTIMATE			
					F VALUE	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM	T VALUE	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM
SATISF OVERALL LEVEL OF SATISFACTION												
GROUP 1 (F) 71		4.1268	1.158	.137								
GROUP 2 (M) 32		4.4375	.619	.109	3.50	.000	-1.43	101	.157		-1.77	97.98
LIKED SATISFACTION WITH DOCTOR												
GROUP 1 68		4.3676	.945	.115								
GROUP 2 29		4.6207	.494	.092	3.66	.000	-1.36	95	.176		-1.72	90.99
NURSES SATISFACTION WITH NURSES												
GROUP 1 62		4.0129	.662	.084								
GROUP 2 22		4.6818	.77	.102	1.93	.097	-1.45	82	.655		-1.52	51.28

## STUDY OF PATIENT SATISFACTION

FILE IN-1 (CREATION DATE = 04/16/81) FILES FROM AM-NR-SPIDA

04/16/81

PAGE

28

## T - T E S T

GROUP 1 - SEX (F) GE		2.0		GROUP 2 - SEX (M) LT		2.0	
VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F 2-TAIL VALUE PROB.	T DEGREES OF 2-TAIL VALUE FREEDOM PROB.	SEPARATE VARIANCE ESTIMATE
OTHERS SATISFACTION WITH OTHER STAFF							
GROUP 1	67	4.3731	.495	.168	1.16	.610	
GROUP 2	30	4.3960	.452	.174			
RECEPT SATISFACTION WITH RECEPTIONISTS							
GROUP 1	70	4.4143	1.028	.123	1.36	.308	
GROUP 2	29	4.1724	1.197	.222			
QUAL OVERALL QUALITY OF CARE							
GROUP 1	67	4.3433	.718	.119	1.14	.701	
GROUP 2	31	4.3548	.415	.164			
APPTER SATISFACTION WITH APPOINTMENT							
GROUP 1	67	3.8358	1.452	.177	1.14	.706	
GROUP 2	31	3.8710	1.360	.244			

STUDY OF PATIENT SATISFACTION  
FILE IN-1 (CREATION DATE = 04/16/81) FILES FROM AMNR,SP,DA

		T - T E S T				P O O L E D V A R I A N C E E S T I M A T E		D E G R E E S O F F R E E D O M		S E P A R A T E V A R I A N C E E S T I M A T E	
VARIABLE	NUMBER OF CASES	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	T VALUE	2-TAIL PROB.	T VALUE	2-TAIL PROB.	T VALUE	2-TAIL PROB.
AVAILABILITY OF APPOINTMENTS											
GROUP 1	76	3.5143	.190	1.10	.805	-.57	.569	-.58	.562		
GROUP 2	26	3.7143	.236								
SATISFACTION WITH PHARMACY											
GROUP 1	64	4.2556	.151	1.01	1.000	.60	.551	.60	.543		
GROUP 2	29	4.1034	.224								
SATISFACTION WITH MEDICAL RECORDS											
GROUP 1	57	4.4035	.127	2.15	.019	2.85 ✓	.005	2.47	.016		
GROUP 2	25	3.6400	.212	2.00							

# STUDY OF PATIENT SATISFACTION

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FILE 14.1 CREATION DATE = 04/16/81 FILES FROM AMNR.SP.DA

VARIABLE		NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F 2-TAIL VALUE		T 2-TAIL VALUE		P 2-TAIL VALUE		T 2-TAIL VALUE		P 2-TAIL VALUE		T 2-TAIL VALUE		P 2-TAIL VALUE	
GROUP 1 - SEX		GE	2.0																
GROUP 2 - SEX		LT	2.0																
SAT WITH LAB SERVICES																			
GROUP 1		43	4.5117	1.095	.161	2.07	.077	-.32	.63	.754	-.30	67.00	.001						
GROUP 2		22	4.5919	.73	.151														
SAT WITH LAB SERVICES																			
GROUP 1		47	4.5400	.880	.128	2.34	.031	-.90	.69	.373	-1.02	64.82	.001						
GROUP 2		24	4.4200	.576	.118														
CONVENIENCE OF LOCATION																			
GROUP 1		66	4.5513	.769	.097	1.05	.843	-.59	.94	.558	-.58	54.92	.002						
GROUP 2		33	4.5333	.609	.148														
SAT WITH PARKING FACILITIES																			
GROUP 1		71	2.8417	1.620	.192	1.00	.965	-.53	101	.600	-.53	59.82	.001						
GROUP 2		32	3.1250	1.621	.287														

## 04/16/81 PAGE

GROUP 1 - SEX		2.0		T - TEST									
GROUP 2 - SEX		2.0											
Variable	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE		SEPARATE VARIANCE ESTIMATE		T DEGREES OF FREEDOM	T VALUE	DEGREES OF FREEDOM
OPHRS	SAT WITH OPERATING HOUSES												
GROUP 1	73	4.4247	.927	.108									
GROUP 2	32	4.4263	.911	.161	1.04	.342	.09	103	.925	.09	60.14	.925	
INPAC	AGENCY OF PHYSICAL												
GROUP 1	72	4.6139	1.216 ✓	.143									
GROUP 2	31	4.6129	.993	.144	2.49	.014	-2.51	101	.014	-2.95 ✓	83.90	.014	
					~2.20								
GINETH	SAT WITH GENERAL INSTRUCTIONS												
GROUP 1	94	4.4063	1.040	.126									
GROUP 2	32	4.4375	.869	.118	2.42	.008	-.04	90	.524	-.74	69.41	.559	

APPENDIX I

SPSS FILE DEW.3 (T-TEST) AND OUTPUT FILE SV.3 COMPARING "RACE"

DEW 3 LIB\$ AT: 04/16/81 12:35:03 JOB: 38408

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GINSTR SAT WITH GENERAL INSTRUCTIONS  
ABOUT MEDICAL PROBLEM/  
PRINT FORMATS CLINIC (1)/ SEX (1)/ AGE (2)/  
STATUS (1)/ CATEG (1)/ GRADE (1)/  
FAMSIZ TO GINSTR (3)/  
T-TEST GROUPS=RACE (3)/VARIABLES=SATISF TO GINSTR  
READ INPUT DATA  
FINISH

I



STUDY OF PATIENT SATISFACTION. SV 3 LIPS AT: 04/16/81 12:35:32 JOB: 38469 04/16/81 PAGE 20

FILE 10.1 (CREATION DATE = 04/16/81) FILES FROM AMNR.SP.0A

GROUP 1 = RACE(Min) OF  
GROUP 2 = RACE(W) LT  
3.000 = Minority  
3.000 = White

T - T E S T

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE				SEPARATE VARIANCE ESTIMATE			
					F VALUE	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM	T VALUE	DEGREES OF FREEDOM	PROB.	
SATISF OVERALL LEVEL OF SATISFACTION												
GROUP 1	11	3.6364	1.433 ✓	.432	2.23	.046	-2.03 ✓	100	.045	11.11	.005	
GROUP 2	91	4.2227	.760	.101	$F_{10,90} = 2.53$							
LIVEMD SATISFACTION WITH DOCTOR												
GROUP 1	10	4.2000	.919 ✓	.291	1.21	.601	-.94	94	.350	10.80	.002	
GROUP 2	86	4.4651	.836	.090	$F_{9,85} = 2.70$							
NURSES SATISFACTION WITH NURSES												
GROUP 1	8	4.2500	1.389 ✓	.491	8.56 ✓	.000	-1.84	81	.070	7.16	.007	
GROUP 2	75	4.6667	.475	.055	$F_{7,74} = 2.15$							

## STUDY OF PATIENT SATISFACTION

04/10/81

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FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM.NR.SP.1A

- T - Y E S -

GROUP 1 - RACE  
 GROUP 2 - RACE

GF 3.000=Minority  
 LT 3.000=White

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM	T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
OTHERS											
GROUP 1	8	4.256	.991	.350	1.21	.611	-75	94	.458	8.09	.511
GROUP 2	88	4.3750	.901	.096	$F_{7,87, .95} = 2.90$						
RECEPT											
GROUP 1	10	4.5000	.527	.167	4.01	.019	.47	96	.646	20.33	.417
GROUP 2	88	4.3295	1.132	.121	$F_{87, 9, .95} = 4.45$						
QUAL											
GROUP 1	9	3.5556	1.236	.412	1.91	.136	-2.70	95	.008	8.88	.008
GROUP 2	88	4.4318	.894	.095	$F_{87, 8, .95} = 3.50$						
APTECH											
GROUP 1	10	3.9000	1.370	.433	1.04	1.000	.01	94	.992	11.29	.002
GROUP 2	86	3.8953	1.398	.151							

21.90

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STUDY OF PATIENT SATISFACTION  
FILE IN:1 (CREATION DATE = 04/16/81) FILES FROM AMNH.SPIDA

VARIABLE		NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F		T		DEGREES OF		SEPARATE VARIANCE			
GROUP 1 - RACE	GROUP 2 - RACE					VALUE	PROB.	VALUE	PROB.	2-TAIL	2-TAIL	2-TAIL	2-TAIL	VALUE	PROB.
AVAILABILITY OF APPOINTMENTS															
GROUP 1	9	2.6667	1.414	✓	.471	1.18	.874			-1.92	.057			-2.06	.03
GROUP 2	88	3.0432	1.534	✓	.164										
SATISFACTION WITH PHARMACY															
GROUP 1	10	4.2000	.919	✓	.291	1.83	.324			-0.02	.966			-0.02	.932
GROUP 2	82	4.2073	1.245	/	.137										
SAT WITH MEDICAL RECORDS															
GROUP 1	9	4.1111	1.269	✓	.423	1.20	.622			-0.16	.872			-0.15	.883
GROUP 2	73	4.1781	1.159		.136										

## STUDY OF PATIENT SATISFACTION

FILE IN:1 (CREATION DATE = 04/16/81) FILES FROM AMNR,SP,DA

04/16/81

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## T - T E S T

GROUP 1 - RACE		3.000		NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	* POOLED VARIANCE ESTIMATE *				* SEPARATE VARIANCE ESTIMATE *			
GROUP 2 - RACE	LT	3.000	GE					F VALUE	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM	T VALUE	DEGREES OF FREEDOM	T VALUE	DEGREES OF FREEDOM
XRAY															
GROUP 1	SAT WITH XRAY SERVICES	6	4.3333	1.211 ✓	.494	1.66	.316	-.53	62	.599	-.43	5.64	.083		
														GE	
GROUP 2	SAT WITH XRAY SERVICES	54	4.5517	.940	.123										
						LT									
LAS															
GROUP 1	SAT WITH LAS SERVICES	6	4.5000	.544	.224	2.22	.373	0.	68	1.000	0.	7.28	1.000		
														GE	
GROUP 2	SAT WITH LAS SERVICES	64	4.5000	.816 ✓	.102										
						LT									
CONVEN															
GROUP 1	CONVENIENCE OF LOCATION	10	4.2000	1.476 ✓	.467	4.80	.000	-1.54	94	.127	-.86	9.44	.414		
														GE	
GROUP 2	CONVENIENCE OF LOCATION	86	4.6047	.674	.073										
						LT									
PARK															
GROUP 1	SAT WITH PARKING FACILITIES	10	2.1000	1.663 ✓	.526	1.11	.734	-1.93	100	.157	-1.85	10.85	.091		
														GE	
GROUP 2	SAT WITH PARKING FACILITIES	92	3.1196	1.582	.105										
						LT									

22.49

GROUP 1 - RACE		NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	T - TEST			SEPARATE VARIANCE ESTIMATE			
GE	LT					F	2-TAIL PROB.	T	DEGREES OF FREEDOM	T	DEGREES OF FREEDOM	
GROUP 2 - RACE												
OPRHS SAT WITH OPERATING HOURS												
GROUP 1	11	4.3636	.24	.279	1.00	1.000						
GROUP 2	93	4.4194	.25 ✓	.096								
INFAC AGENCY OF PHYSICAL												
GROUP 1	10	4.5000	1.269 ✓	.401								
GROUP 2	91	4.1429	1.131	.119	1.26	.539			.94	99	.351	.85
GINSTH SAT WITH GENERAL INSTRUCTIONS												
GROUP 1	10	4.5000	.527	.167								
GROUP 2	89	4.3371	.476 ✓	.103	3.43	.051			.52	97	.606	.83

APPENDIX J

SPSS FILE MAS.3 (CROSSTABS/CHI SQUARE) AND OUTPUT FILE JU.3 COMPARING "CLINICS"

MAS 3 LIBS AT: 04/16/81 12:26:04 JOB: 37938

	FACILITIES-INSIDE/
	GINSTR SAT WITH GENERAL INSTRUCTIONS
	ABOUT MEDICAL PROBLEM/
PRINT FORMATS	CLINIC (1)/ SEX (1)/ AGE (2)/
	STATUS (1)/ CATEG (1)/ GRADE (1)/
	FAMSIZ TO GINSTR (3)/
CROSSTABS	TABLES=SATISF TO GINSTR BY CLINIC
OPTIONS	7,9
STATISTICS	1
READ INPUT DATA	
FINISH	

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 S A T I S F O V E R A L L L E V E L O F S A T I S F A C T I O N B Y C L I N I C C L I N I C  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW	PCT	IAMIC		DATA FR	TOTAL
COL	PCT	I			
TOT	PCT	I			
SATISF			44.01	55.01	
1.000	I	2	I	0	I 2
VERY UNSATISFIED	I	100.0	I	0.	I 1.9
	I	3.9	I	0.	I
	I	1.9	I	0.	I
2.000	I	10	I	0	I 10
SOMEWHAT DISSAT.	I	100.0	I	0.	I 9.7
	I	19.6	I	0.	I
	I	9.7	I	0.	I
3.000	I	1	I	2	I 3
NOT SURE	I	33.3	I	66.7	I 2.9
	I	2.0	I	3.8	I
	I	1.0	I	1.9	I
4.000	I	16	I	20	I 36
SOMEWHAT SAT.	I	44.4	I	55.6	I 35.0
	I	31.4	I	38.5	I
	I	15.5	I	19.4	I
5.000	I	22	I	30	I 52
VERY SATISFIED	I	42.3	I	57.7	I 50.5
	I	43.1	I	57.7	I
	I	21.4	I	29.1	I
COLUMN		51		52	103
TOTAL		49.5		50.5	100.0

CHI SQUARE = 14.00016 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .0073

NUMBER OF MISSING OBSERVATIONS = 3

$$\alpha = .05; \chi^2_{.025} = 11.143$$

(two tail)

$$\therefore 14.0 > 11.143 \text{ (critical } \chi^2 \text{)}$$



## STUDY OF PATIENT SATISFACTION

04/1

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 PARK SAT WITH PARKING FACILITIES BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I		
ROW	PCT	IAMIC	COMBINED	ROW	
COL	PCT	I	DATA FR	TOTAL	
TOT	PCT	I	44.01	55.01	
PARK					
1.000	I	20	I	6	I 26
VERY UNSATISFIED	I	76.9	I	23.1	I 25.2
	I	40.0	I	11.3	I
	I	19.4	I	5.8	I
2.000	I	14	I	12	I 26
SOMEWHAT DISSAT.	I	53.8	I	46.2	I 25.2
	I	28.0	I	22.6	I
	I	13.6	I	11.7	I
3.000	I	1	I	1	I 2
NOT SURE	I	50.0	I	50.0	I 1.9
	I	2.0	I	1.9	I
	I	1.0	I	1.0	I
4.000	I	8	I	12	I 20
SOMEWHAT SAT.	I	40.0	I	60.0	I 19.4
	I	16.0	I	22.6	I
	I	7.8	I	11.7	I
5.000	I	7	I	22	I 29
VERY SATISFIED	I	24.1	I	75.9	I 28.2
	I	14.0	I	41.5	I
	I	6.8	I	21.4	I
COLUMN		50		53	103
TOTAL		48.5		51.5	100.0

CHI SQUARE = 16.1727 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .0028

NUMBER OF MISSING OBSERVATIONS = 3

16.177 > 11.143 (critical  $\chi^2$ )

9

CROSS TABULATION OF									
AVAPT	AVAILABILITY OF APPOINTMENTS				BY CLINIC				
	CLINIC	CLINIC	CLINIC	CLINIC	CLINIC	CLINIC	CLINIC	CLINIC	CLINIC
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

CHI SQUARE = 19.70328 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .0006  
NUMBER OF MISSING OBSERVATIONS = 8

$$19.7 > 11.143 \text{ (critical } \chi^2)$$

WD-8195 650

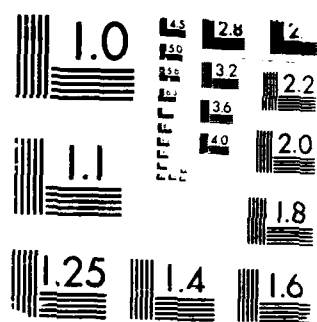
A STUDY OF THE USE OF FAMILY PRACTICE PHYSICIANS IN  
TROOP HEALTH CLINICS O. (U) ACADEMY OF HEALTH SCIENCES  
(ARMY) FORT SAN HOUSTON TX HEALTH C. M A SUTELIX  
APR 81 HCA-23-88 F/G 5/6

2/2

UNCLASSIFIED

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END  
DATE  
FILMED  
9 88



MICROCOPY RESOLUTION TEST CHART

p 3

04

CROSS TABULATION OF			
LIKED	SATISFACTION WITH DOCTOR	BY CLINIC	CLINIC
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

	COUNT	I	CLINIC		
	ROW PCT	IAMIC	COMBINED	DATA FR	ROW TOTAL
	TOT PCT	I	44.0I	55.0I	
LIKED	-----I-----I-----I-----I-----I				
	1.000	I 2 I	I 0 I	I	2
VERY UNSATISFIED	I 100.0 I	I 0. I	I	2.1	
	I 4.4 I	I 0. I	I		
	I 2.1 I	I 0. I	I		
	-----I-----I-----I-----I-----I				
	2.000	I 2 I	I 1 I	I	3
SOMEWHAT DISSAT.	I 66.7 I	I 33.3 I	I	3.1	
	I 4.4 I	I 1.9 I	I		
	I 2.1 I	I 1.0 I	I		
	-----I-----I-----I-----I-----I				
	3.000	I 1 I	I 0 I	I	1
NOT SURE	I 100.0 I	I 0. I	I	1.0	
	I 2.2 I	I 0. I	I		
	I 1.0 I	I 0. I	I		
	-----I-----I-----I-----I-----I				
	4.000	I .18 I	I .17 I	I	35
SOMEWHAT SAT.	I 51.4 I	I 48.6 I	I	36.1	
	I 40.0 I	I 32.7 I	I		
	I 18.6 I	I 17.5 I	I		
	-----I-----I-----I-----I-----I				
	5.000	I 39.3 I	I 34 I	I	56
VERY SATISFIED	I 39.3 I	I 60.7 I	I	57.7	
	I 48.9 I	I 65.4 I	I		
	I 22.7 I	I 35.1 I	I		
	-----I-----I-----I-----I-----I				
COLUMN	45	52	97		
TOTAL	46.4	53.6	100.0		

CHI SQUARE = 5.45660 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .2436

NUMBER OF MISSING OBSERVATIONS = 9

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STUDY OF PATIENT SATISFACTION

p. 4

04/16/

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 NURSES SATISFACTION WITH NURSES BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW	PCT	I	AMIC	DATA FR	TOTAL
COL	PCT	I			
TOT	PCT	I	44.01	55.01	
-----I-----I-----I					
NURSES					
1.000	I	1	I	0	I 1
VERY UNSATISFIED	I	100.0	I	0.	I 1.2
	I	2.4	I	0.	I
	I	1.2	I	0.	I
-----I-----I-----I					
4.000	I	17	I	10	I 27
SOMEWHAT SAT.	I	63.0	I	37.0	I 32.1
	I	41.5	I	23.3	I
	I	20.2	I	11.9	I
-----I-----I-----I					
5.000	I	23	I	33	I 56
VERY SATISFIED	I	41.1	I	58.9	I 66.7
	I	56.1	I	76.7	I
	I	27.4	I	39.3	I
-----I-----I-----I					
COLUMN		41		43	84
TOTAL		48.8		51.2	100.0

CHI SQUARE = 4.55549 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .1025

NUMBER OF MISSING OBSERVATIONS = 22

.000

p5

# STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N   O F   \*\*\*\*\*  
 OTHERS   SATISFACTION WITH OTHER STAFF   BY CLINIC   CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW	PCT	I	AMIC	DATA FR	TOTAL
COL	PCT	I			
TOT	PCT	I	44.0I	55.0I	
-----I-----I-----I					
OTHERS	1.000	I	1	I 0	I 1
VERY UNSATISFIED	I 100.0	I	0.	I 1.0	I 1.0
	I 2.2	I	0.	I	I
	I 1.0	I	0.	I	I
-----I-----I-----I					
	2.000	I	3	I 4	I 7
SOMEWHAT DISSAT.	I 42.9	I	57.1	I 7.2	I 7.2
	I 6.5	I	7.8	I	I
	I 3.1	I	4.1	I	I
-----I-----I-----I					
	3.000	I	0	I 1	I 1
NOT SURE	I 0.	I	100.0	I 1.0	I 1.0
	I 0.	I	2.0	I	I
	I 0.	I	1.0	I	I
-----I-----I-----I					
	4.000	I	17	I 19	I 36
SOMEWHAT SAT.	I 47.2	I	52.8	I 37.1	I 37.1
	I 37.0	I	37.3	I	I
	I 17.5	I	19.6	I	I
-----I-----I-----I					
	5.000	I	25	I 27	I 52
VERY SATISFIED	I 48.1	I	51.9	I 53.6	I 53.6
	I 54.3	I	52.9	I	I
	I 25.8	I	27.8	I	I
-----I-----I-----I					
COLUMN			46	51	97
TOTAL			47.4	52.6	100.0

CHI SQUARE = 2.07868 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .7213

NUMBER OF MISSING OBSERVATIONS = 9

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 RECEPT SATISFACTION WITH RECEPTIONISTS BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I		
ROW	PCT	I	AMIC	COMBINED	ROW
COL	PCT	I		DATA FR	TOTAL
TOT	PCT	I	44.0I	55.0I	
-----I-----I-----I-----I-----I					
RECEPT	1.000	I	0	I 3	I 3
VERY UNSATISFIED	I	0.	I 100.0	I 3.0	I 3.0
	I	0.	I 6.3	I	I
	I	0.	I 3.0	I	I
-----I-----I-----I-----I-----I					
	2.000	I	3	I 6	I 9
SOMEWHAT DISSAT.	I	33.3	I 66.7	I 9.1	I 9.1
	I	5.9	I 12.5	I	I
	I	3.0	I 6.1	I	I
-----I-----I-----I-----I-----I					
	3.000	I	0	I 1	I 1
NOT SURE	I	0.	I 100.0	I 1.0	I 1.0
	I	0.	I 2.1	I	I
	I	0.	I 1.0	I	I
-----I-----I-----I-----I-----I					
	4.000	I	11	I 13	I 24
SOMEWHAT SAT.	I	45.8	I 54.2	I 24.2	I 24.2
	I	21.6	I 27.1	I	I
	I	11.1	I 13.1	I	I
-----I-----I-----I-----I-----I					
	5.000	I	37	I 25	I 62
VERY SATISFIED	I	59.7	I 40.3	I 62.6	I 62.6
	I	72.5	I 52.1	I	I
	I	37.4	I 25.3	I	I
-----I-----I-----I-----I-----I					
COLUMN			51	48	99
TOTAL			51.5	48.5	100.0

CHI SQUARE = 7.40514 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .1160

NUMBER OF MISSING OBSERVATIONS = 7



STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \* \* \*  
 QUAL OVERALL QUALITY OF CARE BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
QUAL	COUNT	I			
	ROW PCT	IAMIC	COMBINED		ROW
	COL PCT	I	DATA FR		TOTAL
	TOT PCT	I	44.0I	55.0I	
	-----I-----I-----I				
	1.000	I	2	I	0
VERY UNSATISFIED	I	100.0	I	0.	I
	I	4.3	I	0.	I
	I	2.0	I	0.	I
	-----I-----I-----I				
	2.000	I	4	I	3
SOMEWHAT DISSAT.	I	57.1	I	42.9	I
	I	8.5	I	5.9	I
	I	4.1	I	3.1	I
	-----I-----I-----I				
	4.000	I	19	I	16
SOMEWHAT SAT.	I	54.3	I	45.7	I
	I	40.4	I	31.4	I
	I	19.4	I	16.3	I
	-----I-----I-----I				
	5.000	I	22	I	32
VERY SATISFIED	I	40.7	I	59.3	I
	I	46.8	I	62.7	I
	I	22.4	I	32.7	I
	-----I-----I-----I				
	COLUMN		47	51	98
	TOTAL		48.0	52.0	100.0

CHI SQUARE = 4.09541 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .2513

NUMBER OF MISSING OBSERVATIONS = 8

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 APTPER SATISFACTION WITH APPOINTMENT BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW PCT	IAMIC			DATA FR	TOTAL
COL PCT	I				
TOT PCT	I	44.0I	55.0I		
-----I-----I-----I-----I-----I					
APTPER					
1.000	I	6	I	4	I 10
VERY UNSATISFIED	I	60.0	I	40.0	I 10.2
	I	12.5	I	8.0	I
	I	6.1	I	4.1	I
-----I-----I-----I-----I-----I					
2.000	I	9	I	6	I 15
SOMEWHAT DISSAT.	I	60.0	I	40.0	I 15.3
	I	18.8	I	12.0	I
	I	9.2	I	6.1	I
-----I-----I-----I-----I-----I					
3.000	I	0	I	1	I 1
NOT SURE	I	0.	I	100.0	I 1.0
	I	0.	I	2.0	I
	I	0.	I	1.0	I
-----I-----I-----I-----I-----I					
4.000	I	14	I	12	I 26
SOMEWHAT SAT.	I	53.8	I	46.2	I 26.5
	I	29.2	I	24.0	I
	I	14.3	I	12.2	I
-----I-----I-----I-----I-----I					
5.000	I	19	I	27	I 46
VERY SATISFIED	I	41.3	I	58.7	I 46.9
	I	39.6	I	54.0	I
	I	19.4	I	27.6	I
-----I-----I-----I-----I-----I					
COLUMN		48		50	98
TOTAL		49.0		51.0	100.0

CHI SQUARE = 3.50579 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .4770

NUMBER OF MISSING OBSERVATIONS = 8

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# STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 PHARM SATISFACTION WITH PHARMACY BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I		
ROW	PCT	IAMIC	COMBINED	ROW	
COL	PCT	I	DATA FR	TOTAL	
TOT	PCT	I	44.0I	55.0I	
-----I-----I-----I-----I-----I					
PHARM	1.000	I	1	I	5
VERY UNSATISFIED	I	16.7	I	83.3	I
	I	2.2	I	10.6	I
	I	1.1	I	5.4	I
-----I-----I-----I-----I-----I					
	2.000	I	2	I	5
SOMEWHAT DISSAT.	I	28.6	I	71.4	I
	I	4.3	I	10.6	I
	I	2.2	I	5.4	I
-----I-----I-----I-----I-----I					
	3.000	I	0	I	2
NOT SURE	I	0.	I	100.0	I
	I	0.	I	4.3	I
	I	0.	I	2.2	I
-----I-----I-----I-----I-----I					
	4.000	I	15	I	9
SOMEWHAT SAT.	I	62.5	I	37.5	I
	I	32.6	I	19.1	I
	I	16.1	I	9.7	I
-----I-----I-----I-----I-----I					
	5.000	I	28	I	26
VERY SATISFIED	I	51.9	I	48.1	I
	I	60.9	I	55.3	I
	I	30.1	I	28.0	I
-----I-----I-----I-----I-----I					
COLUMN		46	47	93	
TOTAL		49.5	50.5	100.0	

CHI SQUARE = 7.51657 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .1110

NUMBER OF MISSING OBSERVATIONS = 13

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 MRPER SAT WITH MEDICAL RECORDS BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW PCT	IAMIC			DATA FR	TOTAL
COL PCT	I				
TOT PCT	I	44.01		55.01	
----- ----- -----					
MRPER	1.000	I	1	I	3
		I	1	I	4
VERY UNSATISFIED	I	25.0	I	75.0	I
		I	2.4	I	7.3
		I	1.2	I	3.7
		I	1.2	I	3.7
----- ----- -----					
	2.000	I	3	I	5
SOMEWHAT DISSAT.	I	37.5	I	62.5	I
		I	7.3	I	12.2
		I	3.7	I	6.1
		I	3.7	I	6.1
----- ----- -----					
	3.000	I	1	I	0
NOT SURE	I	100.0	I	0.	I
		I	2.4	I	0.
		I	1.2	I	0.
		I	1.2	I	0.
----- ----- -----					
	4.000	I	14	I	12
SOMEWHAT SAT.	I	53.8	I	46.2	I
		I	34.1	I	29.3
		I	17.1	I	14.6
		I	17.1	I	14.6
----- ----- -----					
	5.000	I	22	I	21
VERY SATISFIED	I	51.2	I	48.8	I
		I	53.7	I	51.2
		I	26.8	I	25.6
		I	26.8	I	25.6
----- ----- -----					
COLUMN		41		41	82
TOTAL		50.0		50.0	100.0

CHI SQUARE = 2.67710 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .6132

NUMBER OF MISSING OBSERVATIONS = 24

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 XRAY SAT WITH XRAY SERVICES BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW PCT	IAMIC			DATA FR	TOTAL
COL PCT	I				
TOT PCT	I	44.01	55.01		
-----I-----I-----I-----I-----					
XRAY	1.000	I	1	I	2
VERY UNSATISFIED	I	50.0	I	50.0	I
	I	3.1	I	3.0	I
	I	1.5	I	1.5	I
-----I-----I-----I-----I-----					
	2.000	I	1	I	3
SOMEWHAT DISSAT.	I	33.3	I	66.7	I
	I	3.1	I	6.1	I
	I	1.5	I	3.1	I
-----I-----I-----I-----I-----					
	4.000	I	8	I	13
SOMEWHAT SAT.	I	61.5	I	38.5	I
	I	25.0	I	15.2	I
	I	12.3	I	7.7	I
-----I-----I-----I-----I-----					
	5.000	I	22	I	47
VERY SATISFIED	I	46.8	I	53.2	I
	I	68.8	I	75.8	I
	I	33.8	I	38.5	I
-----I-----I-----I-----I-----					
COLUMN		32	33		65
TOTAL		49.2	50.8		100.0

CHI SQUARE = 1.20203 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .7525

NUMBER OF MISSING OBSERVATIONS = 41

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*  
 LAB SAT WITH LAB SERVICES BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
		ROW PCT	IAMIC	DATA FR	TOTAL
		COL PCT	I		
		TOT PCT	I	44.01	55.01
LAB		-----I-----I-----I			
	1.000	I	0	I	1
	VERY UNSATISFIED	I	0.	I	100.0
		I	0.	I	2.7
		I	0.	I	1.4
		-----I-----I-----I			
	2.000	I	1	I	1
	SOMEWHAT DISSAT.	I	50.0	I	50.0
		I	2.9	I	2.7
		I	1.4	I	1.4
		-----I-----I-----I			
	3.000	I	1	I	0
NOT SURE		I	100.0	I	0.
		I	2.9	I	0.
		I	1.4	I	0.
		-----I-----I-----I			
4.000		I	11	I	12
	SOMEWHAT SAT.	I	47.8	I	52.2
		I	32.4	I	32.4
		I	15.5	I	16.9
5.000		-----I-----I-----I			
		I	21	I	23
	VERY SATISFIED	I	47.7	I	52.3
		I	61.8	I	62.2
		I	29.6	I	32.4
		-----I-----I-----I			
COLUMN			34		37
TOTAL			47.9		52.1
					100.0

CHI SQUARE = 2.01122 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .7337

NUMBER OF MISSING OBSERVATIONS = 35

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# STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N   O F   \* \* \* \*  
 \*   C O N V E N   C O N V E N I E N C E   O F   L O C A T I O N   B Y   C L I N I C   C L I N I C   \*  
 \*   \*

		CLINIC			
		COUNT	I	COMBINED	ROW
		ROW PCT	IAMIC	DATA FR	TOTAL
		COL PCT	I		
		TOT PCT	I		
CONVEN		44.01		55.01	
	1.000	I	1	I	0
	VERY UNSATISFIED	I	100.0	I	0.0
		I	2.2	I	0.0
		I	1.0	I	0.0
	2.000	I	2	I	2
	SOMEWHAT DISSAT.	I	50.0	I	50.0
		I	4.3	I	4.0
		I	2.1	I	2.1
	4.000	I	15	I	11
SOMEWHAT SAT.		I	57.7	I	42.3
		I	32.6	I	22.0
		I	15.6	I	11.5
	5.000	I	28	I	37
VERY SATISFIED		I	43.1	I	56.9
		I	40.9	I	74.0
		I	29.2	I	38.5
COLUMN		46		50	96
TOTAL		47.9		52.1	100.0

CHI SQUARE = 2.69956 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .4403

NUMBER OF MISSING OBSERVATIONS = 10

M.D.

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \* \* \* \*  
OPHRS SAT WITH OPERATING HOURS BY CLINIC CLINIC  
\*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW	PCT	I	AMIC	DATA FR	TOTAL
COL	PCT	I			
TOT	PCT	I	44.01	55.01	
-----I-----I-----I					
OPHRS	1.000	I	0	I	2
VERY UNSATISFIED	I	0.	I	100.0	I
	I	0.	I	3.8	I
	I	0.	I	1.9	I
-----I-----I-----I					
	2.000	I	3	I	3
SOMEWHAT DISSAT.	I	50.0	I	50.0	I
	I	5.8	I	5.7	I
	I	2.9	I	2.9	I
-----I-----I-----I					
	3.000	I	1	I	0
NOT SURE	I	100.0	I	0.	I
	I	1.9	I	0.	I
	I	1.0	I	0.	I
-----I-----I-----I					
	4.000	I	19	I	14
SOMEWHAT SAT.	I	57.6	I	42.4	I
	I	36.5	I	26.4	I
	I	18.1	I	13.3	I
-----I-----I-----I					
	5.000	I	29	I	34
VERY SATISFIED	I	46.0	I	54.0	I
	I	55.8	I	64.2	I
	I	27.6	I	32.4	I
-----I-----I-----I					
COLUMN			52	53	105
TOTAL			49.5	50.5	100.0

CHI SQUARE = 4.14525 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .3867

NUMBER OF MISSING OBSERVATIONS = 1



STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 INFAC ADEQUACY OF PHYSICAL BY CLINIC CLINIC  
 \*\*\*\*\*

		CLINIC			
		COUNT	I	COMBINED	ROW
ROW PCT	IAMIC			DATA FR	TOTAL
COL PCT	I				
TOT PCT	I	44.01		55.01	
-----I-----I-----I-----I-----I					
INFAC					
1.000	I	4	I	1	I
VERY UNSATISFIED	I	40.0	I	20.0	I
	I	7.7	I	2.0	I
	I	3.9	I	1.0	I
-----I-----I-----I-----I-----I					
2.000	I	4	I	5	I
SOMEWHAT DISSAT.	I	44.4	I	55.6	I
	I	7.7	I	9.8	I
	I	3.9	I	4.9	I
-----I-----I-----I-----I-----I					
3.000	I	0	I	1	I
NOT SURE	I	0.	I	100.0	I
	I	0.	I	2.0	I
	I	0.	I	1.0	I
-----I-----I-----I-----I-----I					
4.000	I	20	I	14	I
SOMEWHAT SAT.	I	58.8	I	41.2	I
	I	38.5	I	27.5	I
	I	19.4	I	13.6	I
-----I-----I-----I-----I-----I					
5.000	I	24	I	30	I
VERY SATISFIED	I	44.4	I	55.6	I
	I	46.2	I	58.8	I
	I	23.3	I	29.1	I
-----I-----I-----I-----I-----I					
COLUMN		52		51	103
TOTAL		50.5		49.5	100.0

CHI SQUARE = 4.62/33 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .3277

NUMBER OF MISSING OBSERVATIONS = 3

p. 18

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
GINSTH SAT WITH GENERAL INSTRUCTIONS BY CLINIC CLINIC

CHI SQUARE = 6.01759 WITH 4 DEGREES OF FREEDOM SIGNIFICANCE = .1978  
NUMBER OF MISSING OBSERVATIONS = 6

APPENDIX K

SPSS FILE MAS.4 (CROSSTABS/CHI SQUARE) AND OUTPUT FILE JU.4 COMPARING "STATUS"

MAS 4 LIBS AT: 04/16/81 12:29:03 JOB: 38085

---

	FACILITIES-INSIDE/
	GINSTR SAT WITH GENERAL INSTRUCTIONS
	ABOUT MEDICAL PROBLEM/
PRINT FORMATS	CLINIC (1)/ SEX (1)/ AGE (2)/
	STATUS (1)/ CATEG (1)/ GRADE (1)/
	FAMSIZ TO GINSTR (3)/
CROSSTABS	TABLES=SATISF TO GINSTR BY STATUS
OPTIONS	7,9
STATISTICS	1
READ INPUT DATA	
FINISH	

p.2

STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 \*\*\*\*\* SATISF OVERALL LEVEL OF SATISFACTION BY STATUS TYPE OF AC \*\*\*\*\*

		STATUS							
		COUNT	I	ACTIVE	D	ACTIVE	D	RETIRED	RETIRED
		ROW PCT	I	ACTIVE	D	ACTIVE	D	RETIRED	RETIRED
		COL PCT	I	ACTIVE	D	ACTIVE	D	RETIRED	RETIRED
		TOT PCT	I	1.01	2.01	3.01	4.01		
SATISF									
1.000	I	1	I	1	I	0	I	0	I
VERY UNSATISFIED	I	50.0	I	50.0	I	0.	I	0.	I
	I	1.9	I	8.3	I	0.	I	0.	I
	I	1.0	I	1.0	I	0.	I	0.	I
2.000	I	7	I	0	I	3	I	0	I
SOMEWHAT DISAT.	I	70.0	I	0.	I	30.0	I	0.	I
	I	13.0	I	0.	I	15.8	I	0.	I
	I	6.8	I	0.	I	2.9	I	0.	I
3.000	I	2	I	1	I	0	I	0	I
NOT SURE	I	66.7	I	33.3	I	0.	I	0.	I
	I	3.7	I	8.3	I	0.	I	0.	I
	I	1.9	I	1.0	I	0.	I	0.	I
4.000	I	22	I	8	I	3	I	3	I
SOMEWHAT SAT.	I	61.1	I	22.2	I	8.3	I	8.3	I
	I	40.7	I	66.7	I	15.8	I	16.7	I
	I	21.4	I	7.8	I	2.9	I	2.9	I
5.000	I	22	I	2	I	13	I	15	I
VERY SATISFIED	I	42.3	I	3.8	I	25.0	I	28.8	I
	I	40.7	I	16.7	I	68.4	I	83.3	I
	I	21.4	I	1.9	I	12.6	I	14.6	I
COLUMN		54		12		19		18	
TOTAL		52.4		11.7		18.4		17.5	

CHI SQUARE = 26.35590 WITH 12 DEGREES OF FREEDOM SIGNIFICANCE = .0096  
 NUMBER OF MISSING OBSERVATIONS = 3 = .0096

Critical  $\chi^2_{12, .025} = 23.337$   
 (26.3 > 23.3)  $\therefore$  Reject  $H_0$

APPENDIX L

OUTPUT FILE JU.2 COMPARING "RACE"

p. 9

# STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 AVAPT AVAILABILITY OF APPOINTMENTS BY RACE RACE  
 \*\*\*\*\*

		RACE				
		COUNT				
		ROW PCT	WHITE	MEXICAN-AMERICAN	ORIENTAL-EURASIA	BLACK
		COL PCT				
		TOT PCT	2.000	3.000	4.000	6.000
AVAPT						
1.000 VERY UNSATISFIED		14	0	0	1	15
		93.3	0.	0.	6.7	15.5
		15.9	0.	0.	20.0	
		14.4	0.	0.	1.0	
2.000 SOMEWHAT DISSAT.		12	1	1	3	17
		70.6	5.9	5.9	17.6	17.5
		13.6	50.0	50.0	60.0	
		12.4	1.0	1.0	3.1	
3.000 NOT SURE		0	0	0	1	1
		0.	0.	0.	100.0	1.0
		0.	0.	0.	20.0	
		0.	0.	0.	1.0	
4.000 SOMEWHAT SAT.		23	0	0	0	23
		100.0	0.	0.	0.	23.7
		26.1	0.	0.	0.	
		23.7	0.	0.	0.	
5.000 VERY SATISFIED		39	1	1	0	41
		95.1	2.4	2.4	0.	42.3
		44.3	50.0	50.0	0.	
		40.2	1.0	1.0	0.	
COLUMN TOTAL		88	2	2	5	97
		90.7	2.1	2.1	5.2	100.0

CHI SQUARE = 32.01949 WITH 12 DEGREES OF FREEDOM SIGNIFICANCE = .0014

NUMBER OF MISSING OBSERVATIONS = 9

$\chi^2_{critical} = 23.337$   
 $32.01 > 23.337$ , reject  $H_0$

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STUDY OF PATIENT SATISFACTION

FILE IN.1 (CREATION DATE = 04/16/81) FILES FROM AM,NR,SP,DA

\*\*\*\*\* C R O S S T A B U L A T I O N O F \*\*\*\*\*  
 PARK SAT WITH PARKING FACILITIES BY RACE RACE  
 \*\*\*\*\*

PARK	RACE								ROW TOTAL
	COUNT	WHITE	MEXICAN-AMERICAN	ORIENTAL-ASIAN	BLACK				
	ROW PCT								
	COL PCT								
	TOT PCT	2.0001	3.0001	4.0001	6.0001				
VERY UNSATISFIED	1.000	19	1	0	5			25	
		76.0	4.0	0.	20.0			24.5	
		20.7	50.0	0.	71.4				
		18.6	1.0	0.	4.9				
SOMEWHAT DISSAT.	2.000	25	0	1	0			26	
		26.2	0.	3.8	0.			25.5	
		27.2	0.	100.0	0.				
		24.5	0.	1.0	0.				
NOT SURE	3.000	1	1	0	0			2	
		50.0	50.0	0.	0.			2.0	
		1.1	50.0	0.	0.				
		1.0	1.0	0.	0.				
SOMEWHAT SAT.	4.000	20	0	0	0			20	
		100.0	0.	0.	0.			19.6	
		21.7	0.	0.	0.				
		19.6	0.	0.	0.				
VERY SATISFIED	5.000	27	0	0	2			29	
		93.1	0.	0.	6.9			28.4	
		29.3	0.	0.	28.6				
		26.5	0.	0.	2.0				
COLUMN TOTAL		92	2	1	7			102	
		90.2	2.0	1.0	6.9			100.0	

CHI SQUARE = 39.30343 WITH 12 DEGREES OF FREEDOM SIGNIFICANCE = .0001

NUMBER OF MISSING OBSERVATIONS = 4

yes

$$\chi^2_{critical} = 23.337$$

39.3 > 23.337,  $\therefore$  reject  $H_0$



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## SELECTED BIBLIOGRAPHY

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